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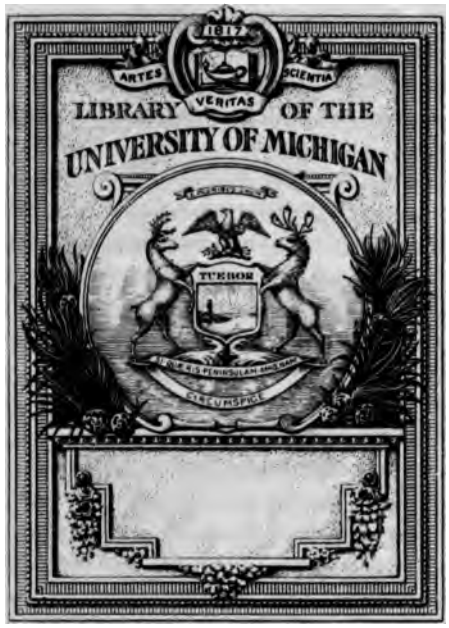
METAPHYSICS OF THE SUPERNATURAL AS ILLUSTRATED BY DESCARTES

BY
LINA KAHN

Submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy, in the Faculty of Philosophy, Columbia University

New York
COLUMBIA UNIVERSITY PRESS
1918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"*À messieurs les archevêques et évêques de France. Messieurs: Je cite devant vous Monsieur des Cartes et ses plus fameux sectateurs: je les accuse d'être d'accord avec Calvin et les Calvinistes sur des Principes de Philosophie contraire à la doctrine de l'Église: c'est à vous, Messieurs, à en juger!*"—Louis de la Ville (le Père de Valois), *Sentiments de Monsieur des Cartes touchant l'essence et les propriétés du corps opposés à la doctrine de l'Église et conformes aux Erreurs de Calvin sur le sujet de l'Eucharistie.* Paris, 1680.

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PREFACE

The present study of Descartes was undertaken for the sake of a better understanding of the common tendency of philosophers to deal with the supernatural. Descartes is one of the modern philosophers who, despite a strong preference for scientific investigation of the world of experience, devoted a great deal of speculation to tradition. To lift the veil from this mystery, his major as well as his minor works and correspondence are studied here in the light of his time. By this method we discover that the conflict between science and theology brought Descartes to the diplomacy of disguising his scientific ideas in a theological garb. Historians have overlooked his scientific side and have brought out only his cautious and timid side. He is represented in the history of philosophy as a dialectician and a rationalist whose main concern was the demonstration of the existence of God and the soul. The attempt is here made to give to Descartes's rationalism its proper setting and to present his naturalism as his genuine philosophy.

Unless otherwise indicated, all footnotes refer to the Adam and Tannery edition. In most cases the spelling has been modernized.

I take this occasion to express my gratitude for valuable suggestions and helpful criticism to Professor F. J. E. Woodbridge, Professor W. P. Montague, Professor John Dewey, and Professor W. T. Bush, all of Columbia University. My warmest thanks are, however, due to the latter, whose constant advice and, particularly, encouragement I most highly appreciate.

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METAPHYSICS OF THE SUPERNATURAL AS ILLUSTRATED BY DESCARTES

CHAPTER I

INTRODUCTION

PERSISTENT PROBLEMS OF PHILOSOPHY

There is a tendency on the part of philosophers to aspire to heaven and to explore heavenly regions. Since heaven has been once for all formed and fixed, the problems of philosophy are always the same. The persistent problems of philosophy reduce themselves to the question of ultimates—the ultimate reality of the world and the ultimate reality of man. This question comes up in philosophy again and again. Only the forms in which it appears are different. They differ with the knowledge, temperament, and surroundings of the philosopher. But no matter in what form this question comes up and what course the road of dialectics takes, philosophers all reach regions that transcend knowledge, and the question being unsolved recurs again.

This question of ultimates has persisted in philosophy under the influence of theology and gained firm ground in the medieval period when philosophy was employed as a means for the advancement of Christian teaching. As taught in Christianity, the kingdom of God was considered by the philosophers of that period to be the only reality, and everything was studied in relation to it. While the Scholastics took it as a matter of fact that God is the ultimate reality and foundation of everything on earth, philosophers of later periods found it necessary to give this teaching a rational basis, and there resulted a desperate search for the ultimate which is still continued. Despite the earnest attempt on the part of the originators of modern philosophy to get away from the supernatural by suggesting experience as a substitute for authority and nature as a substitute for theology, scholasticism persists in philosophy to this very day. Both its subject-matter and method have been either deliberately or unconsciously continued. The mathematical method of present-day philosophy has accomplished no more in the way of proving its presuppositions concerning matters of fact than did the medieval syllogistic method, for there is just as little difference between these two methods as between the medieval

"soul" and the modern "principle of life" or "consciousness." Many a philosopher who considers himself above such superstitions as believing in a soul, wastes, however, a good deal of his ingenuity in investigating spiritual principles which are to perform the functions of the old "soul." That the supernatural bears a good deal of responsibility for the perplexities in which philosophy at present finds itself, a close and systematic study of the history of philosophy leaves no doubt. The supernatural, having once appeared in philosophy, has never left it, or rather, philosophy has never abandoned it. "In the manipulation of that theme, however, three major ideas stand out—God, the soul, and the universe. It is easy to see what a rôle these have played if we only consider what is left when we drop out all speculation about God, all speculation about the soul, and all speculation about the universe." [1]

A consideration of the main topics of the leading philosophers affirms the truth of this statement. Indeed, there are hardly any modern philosophers who under one form or another do not give a more or less prominent place to these ideas in their works. These three ideas led to many other theological questions which are logically connected with them. Among these the problem of freedom stands out conspicuously. Descartes wrote *Meditations*, in which the existence of God and the immortality of the soul are "demonstrated." Spinoza entitles his sections *Concerning God, Of the Nature and Origin of Mind, Of Human Freedom. God, Freedom and Immortality* are the famous topics of Kant. Leibnitz also deals with the traditional conceptions of God, whom he very originally calls the dominant monad, but whom he endows with all traditional attributes and merits. His arguments for God's existence are medieval, almost the same as used by Des cartes. The existence of souls he does not even question; he takes th existence of soul-monads for granted and builds the whole world oue of them. Wolf, the disciple of Leibnitz, develops the latter's philosophy into a purely scholastic system. Berkeley's whole speculato centers around a Deity. Hume, against his own principles, admits a Deity. Hobbes, having assumed that all spirits, both finite and infinite, are corporeal, not to fail in consistence, admits at least a corporeal god. The medieval material of Kant's philosophy was continued by the Hegelian school, which may be regarded as the revival of scholasticism. The philosophy of this school differs from that of the medieval only, perhaps, in modernized terms. The subject-matter and method are the same. Subjectivism and absolutism are the net results of crystallized supernaturalism. The absolute of Bradley, in whom modern

[1] W. T. Bush, "The Emancipation of Intelligence," *Journal of Philosophy, Psychology, and Scientific Methods*, Vol. VIII, p. 169.

scholasticism seems to have reached its climax, is a good illustration.

Even those modern philosophers who have advocated experience and observation in opposition to scholasticism did not get away from it completely. Bacon, who by his experimental method of research had dug up scholastic philosophy by its roots, preserved in the *prima philosophia* a purely scholastic spirit. Hobbes retained in his materialistic system the scholastic first mover. However, the best illustration of a return to scholasticism after an attempted emancipation from it is Descartes. The present study is an inquiry into the grounds for this conservatism.

CHAPTER II

PROGRESSIVE IDEAS IN DESCARTES

I

Descartes was at first strongly opposed to scholasticism. Philosophy signified to him the inquiry after knowledge necessary to man "for the conduct of his life, for the conservation of his health, and for the technical arts." [1] It was to make man happier by enabling him through knowledge of the forces of nature "to enjoy without restriction the fruits of the earth and all the comforts found therein, and to free himself from an infinity of sicknesses of mind and body, and perhaps from the sicknesses of old age." Such knowledge, he saw, could not be obtained by the method of the school which, by its very nature, was not adapted to scientific inquiry. It was an exercise in a skillful derivation of conclusions from premises which were nothing but presuppositions whose validity had never been questioned. But according to Descartes "nothing could block the way to knowledge more than to establish doubtful presuppositions for which we have no positive evidence, but only desire, and to try to derive truth from them," [2] or to inquire into objects concerning which our minds are incapable of securing knowledge. People who studied first causes with authoritatively established principles as the starting-point of the inquiry, he observed, had less knowledge of the world than those who gathered their knowledge from experience or from books where this experience is recorded.[3] He believed that the search for truth would be more successful if it were conducted on an individual basis. The reasonings of each individual about affairs in which he is personally interested and which he can verify by his own experience, he believed, would lead to more fruitful results than speculation.[4] "Good sense," he found, "is of all

[1] "Ce mot signifie l'étude de la Sagesse, et que par la sagesse on n'entend pas seulement la prudence dans les affaires, mais une parfaite connaissance de toutes les choses que l'homme peut savoir, tant pour la conduite de sa vie, que pour la conservation de sa santé et l'invention de tous les arts." Preface to *Principes*, *Oeuvres*, Vol. IX, p. 2.

[2] "Rien ne nous éloigne plus du chemin de la vérité que d'établir certaines choses, comme véritables, qu'aucune raison positive, mais notre volonté seule, nous persuade, c'est-à-dire lorsque nous avons inventé ou imaginé quelque chose, et qu'après cela nos fictions nous plaisent, comme vous faites à l'égard de ces anges corporels, de cette ombre de l'essence divine, et autres choses semblables que personne ne doit admettre, parce que c'est le vrai moyen de se fermer tout chemin à la vérité." *Oeuvres*, Vol. V, p. 405, Latin; Transl. by Cousin, Vol. X, p. 296.

[3] Preface to the *Principes*, *Oeuvres*, Vol. IX, p. 2.

[4] *Discours de la Méthode*, *Oeuvres*, Vol. VI, p. 9.

things among men the most equally distributed." This natural capacity for reasoning needs only right training to be employed with success. The proper function of our intelligence, he held, is not to solve the difficulties of the school, but the different problems of life.[5] His method was directed against knowledge that was historically gathered and transmitted by tradition; it insisted upon sincere inquiry on the part of the individual and on the use of his own judgment in the conduct of his life. This method directed the inquirer to the natural realm. Descartes believed that for the acquisition of knowledge of the world one has to study the world itself. He protested against the procedure of philosophers who neglect experience thinking that knowledge is to be found in their own minds; "ainsi font tous les astrologues, qui, sans connaître la nature des astres, sans même en avoir soigneusement observé les mouvements éspèrent pouvoir en déterminer les effets. Ainsi font beaucoup de gens qui étudient la mécanique sans savoir la physique, et fabriquent au hasard de nouveaux moteurs; et la plupart des philosophes, qui, négligeant l'expérience, croient que la vérité sortira de leur cerveau comme Minerve du front de Jupiter." [6] The most reliable means for the study of nature was held by him to be the senses—one must see and hear things just as they are.[7] But to be able to see things just as they are the mind has to be cleared from transmitted and self-created prejudices.

These ideas were very revolutionary. Philosophy had been in the middle ages an ally of theology. But Descartes saw that "theology points the way to heaven" only and, therefore, it could have no place in the philosophy of one whose purpose was to study the world and man. Leaving it to God to reveal heavenly truth, he broke with his medieval predecessors whose interest centered around man's concern with a beyond, and fixed his attention on problems which were to promote man's welfare on earth. Forgetting history and tradition and the methods of the school, he went out to meet the problems of life and to study nature by experience.

2

Instead of shutting himself up in his study and brooding over the difficulties of the school, Descartes rejected all its solutions as doubtful

[5] "Il faut songer à augmenter les lumières naturelles, non pour pouvoir résoudre telle ou telle difficulté de l'école, mais pour que l'intelligence puisse montrer à la volonté le parti qu'elle doit prendre dans chaque situation de la vie." *Règles, Oeuvres*, Vol. XI, p. 204, Ed. Cousin; Adam and Tannery Edition, Vol. X, p. 361.

[6] *Idem*, p. 380, Adam and Tannery Edition; p. 224, Cousin.

[7] "Il vaut beaucoup mieux se servir de ses propres yeux pour se conduire, et jouir par même moyen de la beauté des couleurs et de la lumière, que non pas de les avoir fermés et suivre la conduite d'un autre." Preface to *Principes, Oeuvres*, Vol. IX, p. 3.

and started on his philosophical career with his eyes wide open to the world. He plunged into life, according to his own account, "collecting varied experience." His first works are free from all metaphysical [8] interest. The lost fragments, a treatise on *Music*, *Quelques Considérations sur les Sciences*, *Algebra*, *Democritica*, *Experimenta*, *Praeambula*, *Initium sapientiae timor domini*, and *Olympica*, seem, as their titles suggest, to be anything but metaphysics. *Regulae ad directionem ingenii*,[9] his earliest treatise extant, shows that his only concern at the outset was scientific knowledge, which limits scientific investigation to objects of which there can be obtained knowledge equal in certainty to mathematics.[10] In this work he looked for no transcendental principles to support his scientific conclusions. There is no mention of a "Perfect Being" or of the "*Cogito ergo sum.*" *Le Monde* has a purely physical interest. He develops there his system of science by studying nature independently of all ontology or metaphysics. The metaphysical principle of God, introduced as if only an appendix to the argument, despite Descartes's intention to give it the appearance of importance, has no bearing on the whole scheme of his physics and seems to be merely a later addition. His science as well as his method were established first, before he had undertaken any ontological investigations.

His primary concern was nature. He set out to cultivate a philosophy which would give him "knowledge highly useful in life, and in place of the speculative philosophy usually taught in the Schools, to discover a practical philosophy by means of which, knowing the power and action of fire, water, air, the stars, the heavens, and all the other bodies that surround us, as distinctly as we know the various crafts of our artisans, we might also apply these forces to all the uses to which they are adapted, and thus make ourselves the lords and possessors of nature." [11] All sciences, even mathematics, he valued only inasmuch as they served this purpose.[12]

[8] Metaphysical is here used in the sense of supernatural, transcending knowledge.

[9] *Regulae ad directionem ingenii* (first appeared in Latin, 1701).

[10] "Il ne faut nous occuper que des objets dont notre esprit paraît capable d'acquérir une connaissance certaine et indubitable." *Règles*, Vol. XI, p. 204, Ed. Cousin; Vol. X, p. 362, Adam and Tannery Edition.

[11] "Car elles m'ont fait voir qu'il est possible de parvenir à des connaissances qui soient fort utiles à la vie, et qu'au lieu de cette Philosophie speculative, qu'on enseigne dans les écoles, on en peut trouver une pratique, par laquelle connaissant la force et les actions du feu, de l'eau, de l'air, des astres, des cieux, et de tous les autres corps qui nous environnent, aussi distinctement que nous connaissons les divers métiers de nos artisans, nous les pourrions employer en même façon à tous les usages auquels ils sont propres, et ainsi nous rendre comme maîtres et possesseurs de la nature. *Discours de la Méthode*, *Oeuvres*, Vol. VI, p. 61. Transl. by Veitch.

[12] "Au lieu d'expliquer un Phénomène seulement, je me suis résolu d'expliquer tous les Phénomènes de la nature, c'est à dire, toute la Physique. Et le dessein que j'ai me contente plus qu'aucun autre que j'aie jamais eû." *Oeuvres*, Vol. I, p. 70. "Et m'étant proposé une étude pour laquelle tout le temps de ma vie, quelque longue qu'elle puisse être, ne saurait suffire, je ferais très mal d'en employer aucune

He was eager to get his information from original sources and made use of every occasion to gather observations which might help him to understand nature. In travelling from Italy to France he turned aside at the Alps to measure their heights and to make observations concerning thunder, lightning, and whirlwinds. While serving in the army he gathered data on mechanics. He examined the machinery of strategic equipments whenever he could. In order to learn the natural order of the stars he observed the comets.[13] To explain the reflection of light he studied optics and got a workman to make the lenses necessary for his experiments. He cultivated in his own garden the plants which he needed for his scientific research.[14] Being interested in anatomy, he dissected animals. He visited butchers to see animals killed and then had brought to his house parts which he dissected for himself at leisure.[15] To study experimentally the circulation of the blood, he investigated the structure of the heart of fishes and of animals.[16] And in order to explain memory and imagination, he tells us, he dissected various specimens.[17] In the *Dioptrics* he represents graphically the human brain on the analogy of that of a calf, in order to show "what man and animals have in common." From the study of animals he went on to the study of man, experimenting and dissecting with the greatest care and attention. Thinking that the application of the laws of medicine would not only

partie à des choses qui n'y servent point. Mais, outre cela, pour ce qui est des nombres, je n'ai jamais prétendu d'y rien savoir, et je m'y suis si peu exercé que je puis dire avec vérité que, bien que j'ai autrefois appris la division et l'extraction de la racine carrée, il y a toutefois plus de dix-huit ans que je ne les sais plus, et si j'avais besoin de m'en servir, il faudrait que je les étudiasse dans quelque livre d'Arithmétique, ou que je tachasse de les inventer, tout de même que si je ne les avais jamais sû." *Oeuvres*, Vol. II, p. 168.

"Vous savez qu'il y a déjà plus de quinze ans que je fais profession de négliger la Géométrie, et de ne m'arrêter jamais à la solution d'aucun problème, si ce n'est à la prière de quelque ami, comme en cette occasion." *Oeuvres*, Vol. II, p. 95.

"Mais je n'ai résolu de quitter que la géométrie abstraite, c'est à dire, la recherche des questions qui ne servent qu'à exercer l'esprit et ce afin d'avoir d'autant plus de loisir de cultiver une autre sorte de géométrie, qui se propose pour question l'explication des phénomènes de la nature." *Oeuvres*, Vol. II, p. 268.

"Je vous envoyais la solution de toutes les questions qu'un de vos Géomètres avait confessé ne savoir pas. Mais n'attendez plus rien de moi, s'il vous plaît, en Géométrie; car vous savez qu'il y a longtemps que je proteste de ne m'y vouloir plus exercer, et je pense pouvoir honnêtement y mettre fin." *Oeuvres*, Vol. II, p. 361.

[13] *Oeuvres*, Vol. VI, p. 269, Ed. Cousin.

[14] "Je laisse croître les plantes de mon jardin, dont j'attends quelques expériences pour tâcher de continuer ma Physique." *Corr.*, Vol. IV, p. 442.

[15] "J'allais quasi tous les jours en la maison d'un boucher, pour lui voir tuer des bêtes, et faisais apporter de là en mon logis les parties que je voulais anatomiser plus à loisir; ce que j'ai encore fait plusieurs fois en tous les lieux où j'ai été." *Corr.*, Vol. II, p. 621.

"En faisant moi même la dissection de divers animaux. C'est un exercise où je me suis souvent occupé depuis onze ans et je crois, qu'il n'y a guère de médecine qui y ait regardé de si près que moi." *Oeuvres*, Vol. II, p. 525.

[16] *Idem.*

[17] "J'anatomise maintenant les têtes de divers animaux, pour expliquer en quoi consistent l'imagination, la mémoire." *Oeuvres*, Vol. I, p. 263.

secure the health of man, but also make him wiser and increase his ingenuity, he tells us, he decided to devote all his life to experimental research in this field.[18]

The necessity of sufficient experimentation as the basis of adequate interpretation is over and over again emphasized. He was sure he could work out a system of physics if he had the "equipment for making the necessary experiments." [19] He hesitated at first to give an explanation of the formation of man on account of want of experience, as he explained in a letter to Mersenne.[20] He appealed to physicians and surgeons to testify even to his affirmation that there are no sensations other than those which take place in the brain.

In building his scientific system he constantly referred to the evidence of facts; he verified his hypothetical conclusions as far as possible, "in making trial in various particular difficulties of the acquired notions of physics." He appealed to experience to support the mechanical principle of his physics and his laws of motion.[21]

3

On the basis of experiments and of observations Descartes constructed his system of physics expounded in the first treatises, *Le Monde*, *Dioptrique*, and *Météores*. In these he gives us a scientific interpretation of the world and man. Nature is the source of all his explanations; and by nature, he understands "not divinity or any other imaginary power, but matter itself" [22] acting according to the laws of mechanics. From the formation of the celestial sphere and the planets down to the formation of man, all is explained by mechanical principles. In *Le Monde* the world is represented as a self-moving mechanism where every effect has its natural and necessary cause. There is no question of a creation, for the supposition that matter and motion ever existed is sufficient explanation, according to Descartes, of the world's origin and existence. "Qu'on me donne l'étendue et le mouve-

[18] *Discours de la Méthode*, *Oeuvres*, Vol. VI, p. 63.

[19] "Je ne doute presque point que je ne puisse achever toute la Physique selon mon souhait, pourvu que j'aie du loisir et la commodité de faire quelques expériences." *Corr.*, Vol. V, p. 261.

[20] "Et même je me suis aventuré d'y vouloir expliquer la façon dont se forme l'animal dès le commencement de son origine. Je dis l'animal en général; car pour l'homme en particulier, je ne l'oserais entreprendre, faute d'avoir assez d'expérience pour cet effet." *Corr.*, Vol. V, p. 112.

[21] "Je *n'ai rien du tout* considéré *que* la figure, le mouvement et la grandeur de chaque corps, n'y examiné aucune autre chose que ce que les lois des mécaniques, dont la vérité peut être prouvée par une infinité d'expériences." *Principes*, *Oeuvres*, Vol. IX, p. 318.

[22] "Sachez donc, premièrement, que par la Nature je n'entends point ici quelque Déesse, ou quelque autre sorte de puissance imaginaire; mais que je me sers de cet mot, pour signifier la Matière même, en tant que je la considère avec toutes les qualités que je lui ai attribuées, comprises toutes ensemble, et sous cette condition que Dieu continue de la conserver en la même façon qu'il l'a créée." *Le Monde*, *Oeuvres*, Vol. XI, p. 36.

ment et je vais faire le monde."[23] The natural laws are sufficient to have transformed the world from chaos into its present state. Moreover, the Mosaic story of creation, a central point of the contemporary metaphysics, gave, according to Descartes, "no explanation of things of nature." The occult substantial forms or real qualities of his predecessors, a basic element of the orthodox metaphysics, he regarded as a refuge of ignorance. Though the Bible and the Council of Trent gave enough justification for the supposition of such fantastical existences, these "poor innocents" had to be banished from his physics as "chimeras," unintelligible and useless for the explanation of facts of nature. For all qualities, motion, and change, his theory of particles accounted in a natural way. One and the same matter was the material out of which heaven and earth and all the products on earth were formed. Man originated from the same material as plants and animals. Human life is accounted for in naturalistic terms. Descartes does not suppose any other principle of life but the blood warmed by the fire of the heart. This material[24] principle and the proper arrangement of our organs condition all our life functions; they "exist in us independently of all power of thinking, and consequently without being in any measure dependent on the soul." [25] It seemed more plausible to him to explain the life of plants, animals and man by a common principle, namely, heat, than to suppose a special principle of life for each, "car la chaleur étant un principe commun pour les animaux, les plantes, et les autres corps, ce n'est pas merveille que la même serve à faire vivre un homme et une plante." [26] Many years of experimentation proved to him that there is nothing in man that can not be explained in a natural way.[27] The formation as well as the growth and functions of the human body he explains scientifically. He does not assume any supernatural germ in the formation of the fœtus; nature is, according to

[23] "Je ne m'arrête pas à chercher la cause de leurs mouvements: car il me suffit de penser, qu'elles ont commencé à se mouvoir, aussitôt que le Monde a commencé d'être . . . Mes raisons, dis-je, me satisfont assez là-dessus; mais je n'ai pas encore occasion de vous les dire. Et cependant vous pouvez imaginer, si bon vous semble, ainsi que font la plupart des Doctes, qu'il y a quelque Premier Mobile, qui, roulant autour du Monde avec une vitesse incomprehensible, est l'origine et la source de tous les autres mouvements qui s'y rencontrent." *Le Monde, Oeuvres*, Vol. XI, p. 11.

[24] "Ce que je nomme ici des esprits, ne sont que des corps, et ils n'ont point d'autre propriété, sinon que ce sont des corps très petits, et qui se meuvent très vite, ainsi que les parties de la flame qui sort d'un flambeau." *Les Passions*, Art. X, *Oeuvres*, Vol. XI, p. 335.

[25] "Examinant les fonctions, qui pouvaient . . . être en ce corps, j'y trouvais exactement toutes celles qui peuvent être en nous sans que nous pensions, ni par consequent que notre âme, c'est à dire, cette partie distincte du corps dont il a été dit ci-dessus que la nature n'est que de penser, y contribue." *Discours, Oeuvres*, Vol. VI, p. 46. Transl. by Veitch.

[26] *Corr.*, Vol. III, p. 122.

[27] "Je parlerai de l'homme en mon Monde un peu plus que je ne pensais, car j'entreprends d'expliquer toutes ses principales fonctions. J'ai déjà écrit celles qui appartiennent à la vie, comme la digestion des viandes, le battement du pouls, la distribution de l'aliment *etc.*, et les cinq sens. J'anatomise maintenant les têtes de divers animaux, pour expliquer en quoi consistent l'imagination, la mémoire, *etc.*" *Corr.*, Vol. I, p. 263.

him, sufficient for its formation, "provided one supposes nature to act according to the exact laws of mechanics." [28] When the objection arose that it was ridiculous to attribute such an important phenomenon as the formation of the fœtus to such a cause, he said, "mais quelles plus grandes causes faut-il donc que les lois éternelles de la nature? Veut-on l'intervention immédiate de l'intelligence? De quelle intelligence? De Dieu lui-même? Pourquoi donc naît-il des monstres?" All the movements which accompany our passions or affections are shown to be produced by the mere mechanism of the body.[29]

In his scientific system his real originality and ingenuity are revealed. *Le Monde* contains, in germ, theories of present-day science. Descartes introduced into physics the doctrine of the continuity of matter; he anticipated modern scientists in his explanation of light, heat, sound, weight, and in the supposition of a constant amount of matter and motion; he first applied the principle of mechanism to the explanation of the world and man; he discovered long before Toricelli and Pascal the fact that the rise of the water in a tube is in exact proportion to the pressure of the air; he was the first to give a theory of undulation; he explained the rainbow and its colors; his theory of particles suggests the molecular theory.

4

Descartes's scientific ideas of nature and man conflicted with the teachings of theology. Thus his physiology and psychology do away with the soul. Descartes's description of man is that of a perfect automaton, such as he is said to have pictured the animal only. He himself, however, called special attention to the fact that for the explanation of the functions of the human body he did not demand any other organs or principle of life than those similar to the ones that animals also possess.[30] He found that the automaton theory was a true description not only of animals, but also of man. If art in imitation of nature can produce automata in which all possible movements take place, there is no reason, he said, why nature itself should not be able to produce automata which are more perfect than those

[28] *Corr.*, Vol. II, p. 525.

[29] "J'espère donner cet été un petit Traité des passions, dans lequel on verra clairement comment tous les mouvements de nos membres qui accompagnent nos passions ou affections sont produits, selon moi, non par notre âme, mais pour le seul mécanisme de notre corps." *Oeuvres*, Vol. V, p. 344, Latin; Transl. by Cousin, Vol. X, p. 240.

[30] "Or avant que je passe à la description de l'âme raisonnable, je désire encore que vous fassiez un peu de réflexion, sur tout ce que je viens de dire de cette Machine; et que vous considériez, premièrement, que je n'ai supposé en elle aucuns organes, ni aucuns ressorts, qui ne soient tels, qu'on se peut très aisément persuader qu'il y en a de tout semblables, tant en nous, que même aussi en plusieurs animaux sans raison." *Traité de l'Homme*, p. 200.

produced by the human hand, and more perfect than the automaton brute, *i. e.*, a mechanism whose construction can account for all the manifestations of human life.[31] Nay, rather, he found a soul unnecessary in the human body: "il est plus surprenant qu'il y ait une âme dans chaque corps humain, que de n'en point trouver dans les bêtes." [32] Indeed, it is superfluous to add a soul to the machine which Descartes represented as performing, independently of the soul, the following functions: " . . . la digestion des viandes, le battement du cœur et des artères, la nourriture et la croissance des membres, la respiration, la veille et le sommeil; la reception de la lumière, des sons, des odeurs, des goûts, de la chaleur, et de telles autres qualités, dans les organes des sens extérieurs; l'impression de leurs idées dans l'organe du sens commun et de l'imagination, la retention ou l'empreinte de ces idées dans la Mémoire; les mouvements intérieurs des Appetits et des Passions; enfin les mouvements extérieurs de tous les membres, qui suivent si à propos, tant des actions des objets qui se presentent aux sens, que des passions, et des impressions qui se rencontrent dans la Mémoire, . ." [33] If all these functions are performed, as Descartes says,[34] by the machine in a perfectly natural way, through the mere disposition of the organs with no other principle of life than the blood excited by the material fire continually kindling in the heart, what is there left for the soul to do? Nothing, says Descartes himself, but the thinking.[35] But he accounted even for thinking (by which he understands perceiving, imagining, remembering, and feeling), as a function of the machine derived from the mere material principle. In one of his letters he even expressed the idea that the body can exist without a soul just as the soul without a body; "on peut appeler ces deux substances accidentelles, en ce que ne considérant que le corps seul, nous n'y voyons rien qui demande d'être uni à l'âme, et rien dans l'âme, qui demande d'être uni au corps." [36] He did not, however, attempt to describe the soul as existing without a body. In describing the functions attributed to the soul, he brought in the different organs of the body engaged in performing these functions, "l'âme humaine séparée du corps n'a point

[31] "Il est conforme à la raison que l'art imitant la nature, et les hommes pouvant construire divers automates, où il se trouve du mouvement sans aucune pensée, la nature puisse de son côté produire ces automates, et bien plus excellents, comme les brutes, que ceux qui viennent de main d'homme, surtout ne voyant aucune raison pour laquelle la pensée doive se trouver partout où nous voyons une conformation de membres telle que celle dex animaux." *Oeuvres*, Vol. V, p. 277, Latin; Transl. by Cousin, Vol. X, p. 206.

[32] *Oeuvres*, Vol. V, p. 277.

[33] *Traité de l'Homme*, *Oeuvres*, Vol. XI, p. 201.

[34] *Idem.*

[35] "Après avoir ainsi considéré toutes les functions qui appartiennent au corps seul, il est aisé de connaître qu'il ne reste rien en nous que nous devions attribuer à notre âme, sinon nos pensées." *Les Passions*, *Oeuvres*, Vol. XI, p. 342.

[36] *Corr.*, Vol. III, p. 461, Latin; Transl. by Cousin, Vol. VIII, p. 578.

proprement de sentiment;[37] but there is in his *Traité de l'Homme* an attempt fully to describe the body existing without a soul. Man is compared to a hydraulic machine, the different parts of which are likened to the nerves and organs, and the running water to the blood.[38] He found in us no external action, as he says, which could assure us of the existence of a thinking soul and of the fact that our body is not a mere machine which moves of itself.[39] In the *Objections et Réponses* he says that it is worthy of notice that no life movements could take place in us, if, having a soul, we had not the necessary physical conditions; these could, however, be produced in a mere machine if it had the same physical construction as ours.[40] The life of a body depends not upon the existence of a soul in it. On the contrary, the existence of the soul depends upon the warmth and movement of the body; and, therefore, death is caused not by the departure of a soul, but by the absence of warmth and by the destruction of an important organ.[41] The difference between a living and a dead body, according to Descartes, is just the same as between a machine whose mechanism is in order, so that the machine is going, and one whose mechanism is broken, so that the functioning has stopped.[42]

[37] *Corr.*, Vol. V, p. 402, Latin; Transl. by Cousin, Vol. X, p. 292.

[38] "Et véritablement l'on peut fort bien comparer les nerfs de la machine que je vous décris, aux tuyaux des machines de ces fontaines; ses muscles et ses tendons, aux autres divers engins et ressorts qui servent à les mouvoir; ses esprits animaux, à l'eau qui les remue, dont le cœur est la source, et les concavités du cerveau sont les regards. De plus, la respiration, et autres telles actions qui lui sont naturelles et ordinaires, et qui dépendent du cours des esprits, sont comme les mouvements d'une horloge, ou d'un moulin, que le cours ordinaire de l'eau peut rendre continus. Les objets extérieurs, qui par leur seule présence agissent contre les organes de ses sens, et qui par ce moyen la déterminent à se mouvoir en plusieurs diverses façons, selon que les parties de son cerveau sont disposées, sont comme des Étrangers qui, entrant dans quelques unes des grottes de ces fontaines, causent eux-mêmes sans y penser les mouvements qui s'y font en leur présence: car ils n'y peuvent entrer qu'en marchant sur certains carreaux tellement disposés, que, par exemple, s'ils approchent d'une Diane qui se baigne, ils la feront cacher dans des roseaux.

. . Et enfin quand *l'âme raisonnable* sera en cette machine, elle y aura son siège principal dans le cerveau, et sera là comme le fontenier, qui doit être dans les regards où se vont rendre tous les tuyaux de ces machines, quand il veut exciter, ou empêcher, ou changer en quelque façon leurs mouvements." *Traité de l'Homme, Oeuvres*, Vol. XI, p. 130.

[39] "Enfin il n'y a aucune des nos actions extérieures, qui puisse assurer ceux qui les examinent, que notre corps n'est pas seulement une machine qui se remue de soi-même, mais qu'il y a aussi en lui une âme qui a des pensées, excepté les paroles, ou autres signes faits à propos des sujets qui se présentent, sans se rapporter à aucune passion." *Corr.*, Vol. IV, p. 574.

[40] *Objections et Réponses, Oeuvres*, Vol. II, p. 52, Ed. Cousin.

[41] "Voyant que tous les corps morts sont privés de chaleur, et ensuite de mouvement, on c'est imaginé que c'était l'absence de l'âme qui faisait cesser ces mouvements et cette chaleur . . . on a cru, sans raison, que notre chaleur naturelle et tous les mouvements de nos corps dépendent de l'âme: au lieu qu'on devait penser, au contraire, que l'âme ne s'absente lorsqu'on meurt, qu'à cause que cette chaleur cesse, et que les organes qui servent à mouvoir le corps se corrompent." *Les Passions, Oeuvres*, Vol. XI, p. 330.

[42] "Le corps d'un homme vivant diffère autant de celui d'un homme mort, que fait une montre, ou autre automate (c'est à dire, autre machine qui se meut de soi-même), lorsqu'elle est montée, et qu'elle a en soi le principe corporel des mouvements pour lesquels elle est instituée, avec tout ce qui est requis pour son action, et la même montre, ou autre machine, lorsqu'elle est rompue et que le principe de son mouvement cesse d'agir." *Ibid.*

He superimposes, however, on the mechanically living and thinking organism a rational soul. But the compromise is unsatisfactory to both the scientist and the theologian, for Descartes calls attention to the fact that the rational soul does not participate in any of the functions described by him as mechanistic. The soul is thus explained away; the name of *soul* only is preserved for consciousness.[43] The fact that he describes the pineal gland as the seat of the soul seems to affirm that *soul* stands for the mind only. For in the *Passions* he alleged that properly speaking one can not place the soul in one particular organ to the exclusion of all the others, because the existence of it is conditioned by the disposition of all the organs of the body; and its non-existence by their dissociation.[44] In his theory of consciousness there is, however, no room left for the psychical. There are no psychical images or sensations which in modern psychology are supposed to constitute the mind. Descartes, on the contrary, emphatically combats the necessity of their existence.[45] He finds that the problem of knowledge is not solved by the supposition of images, for if the image is the exact copy of the object there is no difference between cognition of objects or of images.[46] Neither is there in his psychology any spiritual principle of unification of thought. The unity of perception and thought, despite the doubleness of our organs and the manifoldness of our sensations, is explained as brought about by a corporeal element, the pineal gland, *i. e.*, that part of the brain which is, as he says, not double.

The mind he further identifies with the activity of thinking; thinking, he says, is not an attribute of something that thinks, but is the very essence of the mind as extension is the very essence of body.[47] The mind exists only when consciousness exists, *i. e.*, only when we think. To say that consciousness exists and we do not think is a con-

[43] "Il n'y a qu'une seule âme dans l'homme, c'est à dire, la *raisonnable;* car il ne faut compter pour actions humaines que celles qui dépendent de la raison." *Oeuvres*, Vol. VIII, p. 512, Ed. Cousin.

"Et comme l'*esprit* ou l'*âme raisonnable* est distincte du corps . . . c'est avec juste raison que nous lui donnons à elle *seule* le nom d'*âme*." *Ibid*, p. 513.

"Quod autem *animam rationalem* nomine *mentis humanæ* appellet, laudo: sic enim vitat aequivocationem, quae est in voce *animæ*, atque me hac in re imitatur." *Oeuvres*, Vol. VIII, p. 347.

[44] *Les Passions*, *Oeuvres*, Vol. XI. p. 351.

[45] "Il faut, outre cela, prendre garde à ne pas supposer que, pour sentir, l'âme ait besoin de contempler quelques images qui soyent envoyées par les objets jusques au cerveau, ainsi que font communement nos Philosophes." *Dioptrique*, *Oeuvres*, Vol. VI, p. 112.

[46] "Il faut au moins que nous remarquions qu'il n'y a aucunes images qui doivent en tout resembler aux objets qu'elles représentent: car autrement il n'y aurait point de distinction entre l'objet et son image. Il est seulement question de savoir comment elles peuvent donner moyen à l'âme de sentir toutes les diverses qualités des objets auquels elles se rapportent." *Dioptrique*, *Oeuvres*, Vol. VI, p. 113. By "l'âme" he means here, as explained in the above quotation, the human mind.

[47] "La pensée n'est pas conçue comme un attribut qui peut être joint ou séparé de la chose qui pense; . . . la pensée constitue son essence, ainsi que l'extension constitue l'essence du corps." *Oeuvres*, Vol. V, p. 193, Latin; Transl. by Cousin, Vol. X, p. 147.

tradiction. This identification of thinking and consciousness explains his assertion that we always think.[48] Otherwise he would have to conclude that consciousness ceases to exist.[49] In fact, he says, he could more easily conceive that consciousness ceases to exist than that consciousness exists when we do not think.[50] The "innate idea," misrepresented in the history of philosophy, is nothing but the natural capacity of our thinking faculty to form such ideas under certain circumstances.[51] His discussion of the formation of universals in the *Principles* speaks against the innateness of concepts.[52]

Descartes's cosmology interfered with the teachings of the church and theology. The "universe" of Aristotle and Thomas Aquinas, which suited the interests of the church, seems to be preserved by Descartes in name only. It is deprived of all its fundamental characteristics. Its limits are removed and the world is made infinitely extended. According to the traditional teaching of theology the attribute of infiniteness belongs to God only and, therefore, the world can not be otherwise than limited. *Le Monde* describes the world as moving of itself by natural laws, while the traditional theological doctrine holds

[48] "Mais il me semble qu'il est nécessaire que l'âme pense toujours actuellement, parce que la pensée constitue son essence, ainsi que l'extension constitue l'essence du corps." *Ibid.*

[49] "La raison pour laquelle je croi que l'âme pense toujours, est la même qui me fait croire . . . que ce qui constitue la nature d'une chose est toujours en elle, pendant qu'elle existe; en sorte qu'il me serait plus aisé de croire que l'âme cesserait d'exister, quand on dit qu'elle cesse de penser, que non pas de concevoir qu'elle fût sans pensée." *Corr.*, Vol. III, p. 478.

[50] For a similar reason he denied a soul to animals, declaring: "Je ne leur refuse pas même le sentiment autant qu'il dépend des organes du corps. Ainsi mon opinion n'est pas si cruelle aux animaux qu'elle est favorable aux hommes." *Oeuvres*, Vol. V, p. 278, Latin; Transl. by Cousin, Vol. X, p. 208.

[51] "Lorsque j'ai dit que l'idée de Dieu est naturellement en nous, je n'ai jamais entendu autre chose, *que la nature a mis en nous une faculté par laquelle nous pouvons connaitre Dieu*; mais je n'ai jamais écrit ni pensé que telles idées fussent *actuelles* ou qu'elles fussent des espèces distinctes de la faculté même que nous avons de penser. Et même je dirai plus, qu'il n'y a personne qui soit si éloigné que moi de tout ce fatras d'entités scholastiques; . . . Je l'ai nommé naturelle, mais je l'ai dit au même sens que nous disons que la générosité ou quelque maladie est naturelle à certaines familles." *Oeuvres*, Vol. X, p. 106, Ed. Cousin.

"Selon que l'esprit est déterminé par soi-même ou par des causes étrangères, à considérer tel ou tel objet, il trouve en lui-même telle ou telle autre idée de ce qu'il considère." *Oeuvres inédités de Descartes*, Foucher de Careil, 1859, p. 65.

"Je n'entends pas que l'idée de Dieu soit en nous autrement que les idées de toutes les vérités connues par elles-mêmes, je n'entends pas qu'elles soient toujours en acte, représentées dans quelque partie du cerveau, comme des vers se trouvent dans un manuscrit de Virgile, mais elles y sont seulement en puissance comme diverses figures dans un morceau de cire." *Foucher de Careil, Op. Cit.*, p. 63.

[52] "*Quels sont les universaux.* Qui se font de cela seul que nous nous servons d'une même idée pour penser à plusieurs choses particulières qui ont entre elles *un certain rapport*. Et lorsque nous comprenons sous un même nom les choses qui sont représentées par cette idée, ce nom aussi est universel. Par exemple, quand nous voyons deux pierres, et que, sans penser autrement à ce qui est de leur nature, nous remarquons seulement qu'il y en a deux, nous formons en nous l'idée d'un certain nombre que nous nommons le nombre deux. Si, voyant ensuite deux oiseaux ou deux arbres, nous remarquons, sans penser aussi à ce qui est de leur nature, qu'il y en a deux, nous reprenons *par ce moyen* la même idée que nous avions auparavant formée, et la rendons universelle, et le nombre aussi que nous nommons d'un nom universel, le nombre deux. De même, lorsque nous considérons une figure de trois côtés, nous formons une certaine idée, que nous nommons l'idée du triangle, et nous en servons ensuite à nous représenter *généralement* toutes les figures qui n'ont que trois côtés, *etc.*" *Principes*, Part I, Section 59, *Oeuvres*, Vol. IX.

the extra-mundane God as the moving cause of the world. Mechanical laws exclude final causes, which, Descartes found, do not help us to understand nature. The opposition of the heavens and the earth which is part of the theological conception of the universe is nullified in Descartes's system, where the Copernican theory is practically admitted. Descartes places the earth among the stars and lets it move around the sun during the year and around its own axis to form the day.[53] This scheme is rejected by the Roman hierarchy whose teachings seemed to lose their force if the world ceased to be a geocentric system. If the earth is at the center, man's position is most remote from God, who abides beyond the outer sphere of the universe, and, therefore, man is in a place which is most degraded, for the universe becomes gradually better as it approaches the sphere of God's habitation. The church exists to rescue man from his helpless position and to bring his soul nearer to God. But if the earth is among the stars, as is held by Descartes, man is too near to heaven to need the mediation of the church for his salvation. This may, of course, be for the church a very good reason for putting the earth at the center, but Descartes in his study of nature looked for no other than astronomical justification for placing the earth, and he found no instance which would support its immobility. He even expressed his regret for those who, trying to make the geocentric system an article of faith, have no stronger reasons to support this doctrine than those advanced by its adherents.[54] He found more convincing the observations related in Galileo's book, observations which deprive the sun of its movement. Moreover, Descartes's system brings heaven and earth down to one level. According to this theory the heavenly bodies, just as the earthly, gradually arose by purely mechanical laws. There is no heavenly element in Descartes's system—both the celestial and the terrestrial spheres are formed from one and the same kind of matter to which they can be reduced again. The vortex theory is applied also to the celestial sphere, which is found to consist of many heavens.

His suggestion of the possibility of the existence of many earths conflicted with the doctrine of redemption according to which Christ was incarnated only on one earth.[55]

Descartes's idea of the basis of morality which grew out of his view of man and nature overthrew traditional ethics. His belief in the equal distribution of reason among all men led him to the fundamental

[53] *Le Monde, Oeuvres*, Vol. XI, p. 81.

[54] "J'ai compassion avec vous de cet auteur qui se sert de raisons astrologiques pour prouver l'immobilité de la Terre; mais j'aurais encore plus de compassion du siècle, si je pensais que ceux qui ont voulu faire un article de foi de cette opinion, n'eussent point de plus fortes raisons pour la soûtenir." *Oeuvres* Vol. I, p. 258.

[55] Abbot Terrason, *Traité de l'Infini*, 1750. (*Philosophical Review*, 1905.)

precept, "all that is necessary to right action is right judgment." This setting of morality left no room for any authoritative sanction, either divine or human—the basis of traditional ethics. With this rule at the basis, morality was taken out of the hands of authority and became the private business of every individual. Every one is master over his own conduct in so far as he has to obey his own reason only. The problem of vice and virtue, a vital problem of traditional ethics, was reduced to the question of knowledge and ignorance. If all that is necessary for right action is right judgment, the problem of morality centers around the question of how to reach right judgment in all matters and on all occasions. According to Descartes no right judgment is possible without a thorough understanding of the particular case in question; it requires knowledge of what we judge. All vice, according to him, comes from weakness which follows from ignorance; all virtue, from the firm resolution to do the thing that one considers to be best after a close examination of the case in question, and to employ all one's power of mind to know what is best.[56] There is no fixed good; it has to be determined by individual judgment in every particular case. What is good at one time and one place may not be so at another time and at another place. It is contrary to reason to hold a thing as always good, because it proved to be so once. This conflicted with Christian teaching, according to which, as was objected, the good is determined by the authority of God. The question of right and wrong in the pursuit of good and evil Descartes considered to be a theological question which, therefore, had no place in his natural philosophy.[57]

Descartes's conception of error left no room for the traditional problem of the origin of sin, like the Augustinian problem, for instance, where particular sins are explained by the original sin of mankind, whose salvation can be brought about by the help of the church. To Descartes every particular sin is original for itself, and its origin is the ignorance of the individual. Salvation from sin can be brought about not by grace and through the church, but by knowledge only. Everybody wants the good, but not everybody knows how to obtain it. Morality presupposes the knowledge of other sciences. The cultivation of the natural reasoning capacity and knowledge of nature are the two prerequisites for rightness in conduct. For man, being part of nature and living in a mechanical world, can maintain the integrity of his existence only by being able to utilize the world for his benefit.

[56] *Corr.*, Vol. V, p. 83.

[57] "Le bien faire dont je parle ne se peut entendre en termes de Théologie, où il est parlé de la Grâce, mais seulement de Philosophie morale et naturelle, où cette Grâce n'est point considérée." *Oeuvres*, Vol. I, p. 366.

Descartes's interpretation of right and wrong action avoided also the traditional problem of freedom. As a logical consequence of his fundamental proposition of morality, evil is not a necessary part of the world and, therefore, the traditional problem of legitimatizing evil is excluded.

His physics undermined the theory of the Eucharist. In the construction of his system of physics his only concern was as far as possible adherence to facts and a most intelligible explanation of nature. As a result, it conflicted with an important doctrine of the church. His theories of accidents and extension followed out logically undermined completely the theory of the Eucharist. If, according to Descartes, accidents have no separate and independent existence, how do the accidents of the bread and wine remain during the sacrament when the bread is no longer there and another body is in its place? Despite the objections made, he persistently asserted that the independent existence of real accidents is incredible and unintelligible. It seemed to him a contradiction to say that the accidents of the wine and bread remained while the wine and the bread changed into another substance. For if all accidents remained, what was it that changed, he asked. He was quite confident that even all theologians would have to agree with him that nothing of that which we perceive by the senses has changed, "car il est certain que la diversité des noms qu'on leur a donnés (to the different objects), ne vient que de ce qu'on a remarqué en elles diverses propriétés qui tombent sous les sens."[58] He even went so far as to express hope that a time would come when even all theologians would reject the existence of real accidents as of little certainty even in matters of belief and as repugnant to reason, and that his theory would be accepted instead. He neither rejected his principles nor did he want to attempt a reconciliation of them with the mysteries of the Eucharist.

Another difficulty with respect to the theory of the Eucharist arose because Descartes sometimes appeared to identify matter with extension. If matter and extension are identical, how can the body of Christ be present in the dimensions of the bread? Descartes saw these difficulties only when his attention was called to the fact that his principles of physics exposed the theory of the Eucharist to great "danger".

5

Despite the fact that Descartes "revered theology, and aspired as much as any one to reach heaven" he was anxious to avoid whatever was based on divine revelation. He says he preferred rather to keep

[58] *Corr.*, Vol. IV, p. 375.

silence concerning such points, wanting neither to accept what was advanced by the Scholastics or Aristotle nor to advance anything contrary to the decisions of faith. His decision at the outset was not to treat any theological questions under the pretext that reason is impotent to penetrate matters of faith. Whatever is subject to revelation had according to him no place in philosophy, whose business he held it was properly to investigate only things of which we can obtain a clear and distinct knowledge; it is vain labor to examine things which are beyond our comprehension.[59] He drew a sharp line of distinction between reason and faith. He held that what can be taken on faith is not always acceptable to reason. When, against his theory of the gradual development of the world by mechanical laws, it was objected that the world had existed in its present state since the very creation, he was willing to accept this latter view on faith, as he said, but not by reason. His conviction was that questions of faith can not be demonstrated by reason and that to attempt to demonstrate them by reason is to do them injustice.

Descartes was strongly opposed to mixing religion with philosophy. He grew indignant and did not finish a book which was sent to him by Mersenne, as he explained, "parce qu'il me semblait ensuite qu'il mélait la Religion avec la Philosophie, et ... cela est entièrement contre mon sens."[60] He endeavored to eliminate problems of orthodox metaphysics from his philosophy.[61] His proposition not to accept anything as true unless it was clearly seen to be so was hardly favorable to the interpretation of mysteries. He refused to say anything concerning the questions of the compatibility of God's omnipotence and of predestination with man's freedom, or anything concerning the question whether God always made what he knew to be perfect, when these questions were proposed to him by the Princess Elizabeth. A finite spirit, he asserted, can not get at the bottom of infinite things. No considerations could make him undertake an investigation of the mysteries of grace, of the trinity, or of incarnation. He was anxious not to let any theology slip into his writing, as he explained . . . "je m'abstiens, le plus qu'il m'est possible, des questions de Théologie . . . ".[62] He even avoided a definite answer when his attention was called to the fact that certain points of his philosophy conflicted with theology. All the objections against his view of the occult qualities and his theory of extension which conflicted with the theory of th

[59] *Regulæ.*

[60] *Oeuvres*, Vol. II, p. 570.

[61] "J'ai toujours excepté les choses qui regardent la foi et les actions de notre vie, lorsque j'ai dit qu nous ne devons donner créance qu'aux choses que nous connaissons évidemment." *Objections e Réponses, Oeuvres*, Vol. II, p. 77, Ed. Cousin.

[62] *Corr.*, Vol. IV, p. 119.

Eucharist did not make him attempt at once a reconciliation of his teachings with matters of belief. He was very unwilling to enter upon a consideration of the doctrine of the Eucharist on the basis of his theory. Only when Arnauld objected in the name of the Scholastic theologians and asked him how he would reconcile his teaching of extension with that of the Eucharist, he says, he could no longer remain silent.[63] He finally ventured an explanation of the doctrine in such a way, he says, as would be suited to avoiding the calumnies of the heretics who find it incomprehensible and full of contradictions.

RÉSUMÉ

To summarize, Descartes set out on his philosophical career as a naturalist, keeping strictly away from whatever had a supernatural tinge. His problems were problems of life and his method experimentation, as much as was within his reach, and hypotheses based on scientific knowledge of the day and on mathematical reasoning.

[63] *Oeuvres*, Vol. V, p. 190, Latin; Transl. by Cousin, Vol. X, p. 143. *Lettres*, Vol. I, p. 325, Ed. Clerselier.

CHAPTER III

CONSERVATION OF TRADITIONS DESPITE PROGRESSIVE IDEAS

I

Despite the fact that Descartes had set out on a new path, that of naturalism, his later works, the *Discourse*,[1] the *Meditations*,[2] and the *Principles*[3] surprise us with their reaction. Both in subject-matter and in method he fell back into the error of his predecessors against whom he had arisen. He tells us in the *Discourse* that in "pulling down an old house, we usually preserve the ruins to contribute to the erection of the new," but Descartes preserved even more than the ruins—a surprising outcome in view of his preparation for the new structure and his first attempt at construction. Having first studied his earliest works where the world and life are represented as going on according to natural laws only, independent of all supernatural powers, and where facts are the criterion of truth, we are surprised to find in his later works that his physics and the very existence of the world are made dependent on the existence of a Perfect Being; that the principle of definition is to take the place of facts in the derivation and verification of truth about the material world, and that the senses, which were the most reliable sources of information in the study of nature, are doubted. He thus returned to authority and tradition discarded by him at the outset.

The *Cogito ergo sum*, which is so glorified in the histories of philosophy as the most original idea of Descartes, is also nothing but a medieval tradition, and is not the thing for which Descartes is to be given an immortal place in the history of philosophy. We find the same in St. Augustine, who in the state of doubt also takes his own existence as the safest starting-point, *Si fallor, sum*. The anticipation of Descartes's principle was pointed out by Arnauld in the second *Objection*, where he quotes the corresponding words of both philosophers on that point.[4] St. Augustine lets Alipius, in disputing with Evodius concerning the existence of God, say: "Premièrement, je vous

[1] *Discours de la Méthode* (first appeared in French, 1637).
[2] *Méditations* (first appeared in Latin, 1641).
[3] *Principes* (first appeared in Latin, 1644).
[4] *Objections et Réponses, Oeuvres*, Vol. IX, p. 154.

demande, afin que nous commencions par les choses les plus manifestes, savoir si vous êtes, ou si peut-être vous ne craignez point de vous méprendre en répondant à ma demande, combien qu'à vrai dire si vous n'étiez point, vous ne pourriez jamais être trompé." Instead of this Descartes says: "Mais il y a un je ne sais quel trompeur très puissant et très rusé, qui met toute son industrie à me tromper toujours. Il est donc sans doute que je suis, s'il me trompe."

In the same *Objection* Arnauld has pointed out Descartes's likeness to St. Augustine in the problem of the *Meditations* and the *Principles*, wherein Descartes tries to show that the soul is more clearly perceived than the body; similarly St. Augustine in the *De quantit. animæ* rejects as false the opinion that the perceptions of the soul are less clear than those of the senses.

2

The traditional problems of God and the soul are given a prominent place by Descartes. The treatment of these problems is supposed to justify the fame attributed to Descartes by posterity. It does not display, however, any of his originality or ingenuity. He himself confesses that he made use of the demonstrations of others in his proofs of the existence of God and the soul, for the reason that it is almost impossible to discover new ones.[5]

His arguments concerning God represent, in fact, a mixture of theology and traditional philosophy. God is endowed with all the attributes ascribed to him by theology. He is one and eternal; He has existed from all eternity and will exist to all eternity; He is all-knowing, all powerful, and is the creator and director of all things.[6] (What treason to his *Le Monde!*) Descartes does not even pretend to have said concerning God anything more than the theologians did, to quote his own words: "Je n'ai rien dit touchant la connaissance de Dieu, que tous les Théologiens ne disent aussi." [7]

The various arguments which Descartes uses to prove God's existence go back to St. Augustine. They are either a restatement or a variation of the latter's ontological argument. Though from the point

[5] "Presque toutes les raisons qui ont été apportées par tant de grands personnages, touchant ces deux questions, sont autant de démonstrations, quand elles sont bien entendues, qu'il soit presque impossible d'en inventer de nouvelles: si est-ce que je crois qu'on ne surait rien faire de plus utile en la Philosophie, que d'en rechercher une fois curieusement et avec soin les meilleures et les plus solides, et les disposer en un ordre si clair et si exact, qu'il soit constant désormais à tout le monde, que ce sont de véritables démonstrations." *Méditations, Epître, Oeuvres*, Vol. IX, p. 5.

[6] "Je conçois un Dieu souverain, eternel, infini, immuable, tout connaissant, tout puissant et Créateur universel de toutes les choses qui sont hors de lui . . . " *Méditations, Oeuvres*, Vol. IX, p. 32.

. . Je vois clairement qu'il est necessaire qu'il ait été auparavant de toute éternité, et qu'il soit éternellement à l'avenir." *Ibid.*

[7] *Corr.*, Vol. III, p. 544.

of view of logic an improvement upon St. Augustine, they are all, however, equally unsuccessful. In his arguments he involves himself in a circular reasoning, as was first pointed out by Arnauld. With regard to Descartes's proof of God by the clear and distinct idea of Him, Arnauld presents the following passage in the *Objections*. "Il ne me reste plus qu'un scrupule, qui est de savoir comment il se peut défendre de ne pas commettre un cercle, lorsqu'il dit que 'nous ne sommes assurés que les choses que nous concevons clairement et distinctement sont vraies, qu'à cause que Dieu est ou existe'. Car nous ne pouvons être assurés que Dieu est sinon parce que nous concevons cela très clairement et très distinctement . . . " [8]

This circular reasoning Descartes repeats again and again. In the *Meditations* we find even in one and the same passage the two following expressions: "Au reste, de quelque preuve et argument que je me serve (to prove God's existence), il en faut toujours revenir là, qu'il n'y a que les choses que je conçois clairement et distinctement, qui aient la force de me persuader entièrement" and " . . . Je remarque que la certitude de toute les autres choses en depend (upon the truth of God's existence) si absolument, que sans cette connaissance il est impossible de pouvoir jamais rien savoir parfaitement." [9]

A similar circular reasoning was pointed out by Arnauld in Descartes's proof from causality. Arnauld correctly saw that Descartes first used his own existence as a premise for the derivation of God's existence and then God's existence to explain his own existence.[10]

Moreover, his arguments do not give us any empirical ground of assurance of the universal existence of the innate idea, which is the main point on which the certainty of the whole proof depends, and even less assurance of the existence which they seek to prove. The idea of the perfect is merely an idea and may have no metaphysical significance.

Descartes is not more successful in his demonstrations of the existence of the soul. In his treatment of the problem of the soul there lurks a mixture of accepted beliefs concerning the soul and of his own radical conceptions. He is wavering between the two, trying to do justice to the old and not too much injustice to his own. The problem of the soul is taken up in the form of a demonstration of the distinction between soul and body. If the arguments dealing with the soul are supposed to be demonstrations of the soul's immortality, as they are

[8] *Objections et Réponses, Oeuvres*, Vol. II, p. 29, Ed. Cousin.

[9] *Méditations, Oeuvres*, Vol. IX, pp. 54 and 55.

[10] "Et toute la force de l'argument dont j'ai ici usé pour prouver l'existence de Dieu, consiste en ce que je reconnais qu'il ne serait pas possible que ma nature fût telle qu'elle est, c'est à dire que j'eusse en moi l'idée d'un Dieu, si Dieu n'existait véritablement." *Méditations, Oeuvres*, Vol. IX, p. 41.

taken to be by some, or as even the original title of the *Meditations* suggests,[11] they are complete failures. But Descartes does not even pretend to have attempted to prove the soul's immortality. When Mersenne pointed to the fact that there is in the *Meditations* no word concerning the immortality of the soul, Descartes answered that there was nothing surprising about that, for he could not at all prove that God could not destroy the soul after death.[12] He then asked Mersenne to change the title of the *Meditations* from *In qua Dei existentia et animæ immortalitas demonstratur*, to *In quibus Dei existentia et animæ humanæ a corpore distinctio demonstratur*. In a letter written to Igby he says that he does not know anything concerning the soul after death and, therefore, kept silent on this point.

Where he is said to deal with the immortality of the soul his main concern is, as he himself tells us, to point out the distinction between mind and body. **Whenever he pretends to speak of the soul he speaks of the mind or consciousness, evidently identifying the soul with the mind.** Mind according to him is thinking itself,[13] and he emphasizes the fact that it is distinct from the body. Undoubtedly, mind or thinking is not body, but even if we know that thinking is distinct from body what else do we know of the nature of the mind? If thinking, or mind, is distinct from body, thinking, or mind, is distinct from body; this does not, however, suggest any other property of the mind. Descartes, however, says in the *Discourse* that he draws from this the conclusion that consciousness or thinking is a substance, which in the Cartesian language means an indestructible and an eternal being which is independent of the body and of the material world. How Descartes by unbiassed reasoning could ever have come to this conclusion is incomprehensible, particularly, if we take into consideration the fact that he was a genius in mathematics, which means a perfect logician.

The logic of the proofs of the soul's immortality did not seem to satisfy the religious mind more than it did the scientific one Arnauld questions the legitimacy of the conclusion of the soul's immortality on the ground of the distinction between soul and body, for according

[11] Renati Descartes, *Meditationes de Prima Philosophia.* In qua Dei existentia et animæ immortalitas demonstratur.

[12] "Pour ce que vous dites, que je n'ai pas mis un mot de l'Immortalité de l'Âme, vous ne vous en devez pas étonner; car je ne saurais pas démontrer que Dieu ne la puisse annihiler, mais seulement qu'elle est d'une nature entièrement distincte de celle du corps." *Corr.*, Vol. III, p. 265.

[13] "La pensée n'est pas conçue comme un attribut qui peut-être joint ou séparé de la chose qui pense, ainsi que l'on conçoit dans le corps la division des parties, ou le mouvement."

"La pensée constitue son essence, ainsi que l'extension constitue, l'essence du corps." *Oeuvres*, Vol. X, p. 147, Ed. Cousin; Adams and Tannery Edition, Vol. V, p. 193, Latin.

"La pensée, ou la nature qui pense, dans laquelle je crois que consiste l'essence de l'esprit humain." *Oeuvres*, Vol. V, p. 221.

to the principles of the school the souls of animals are distinct from their bodies and are, nevertheless, supposed to perish with them.[14]

Aside from the fact that the arguments for the distinction between mind and body do not give us the conclusion of the immortality of the soul and are failures from the point of view of logic, they do far less give us the assurance of the actual independent existence of the soul. This, however, even the best logic could not do.

In Descartes's arguments concerning the existence both of the soul and of God there is no trace of any empirical investigation. The problems of the *Meditations* and part of the *Principles* and of the *Discourse* are, on the contrary, built on traditional material imparted to him from childhood through education, despite his earnest desire at the start to make his philosophical, scientific pursuits with a mind as a "*tabula rasa*" and to lean on experience as main support for his philosophical conclusions.

Nor is there any attempt whatsoever at historical research. He did not let himself be misled by such questions as whether the idea of God was really innate in all men at all times and all places. He was not in the least concerned to find out the fact that there are savages who are wholly ignorant of such pious ideas. Neither was he informed of such scientific experiments as were performed later in the nineteenth century, and which revealed, for instance, that a woman, who having been deaf and dumb all her life, had no idea of a God when her faculties were restored. Descartes takes it for granted that the idea of the Perfect Being is universally innate and goes on to construct on its basis arguments in favor of the existence of God quite undeterred by the fact that in so doing he begs the question. There is another begging of the question in the argument for God's existence by taking it for granted that the idea of God is a perfect idea.

The same mistake he commits in his proof of the existence of the soul by taking it for granted that consciousness exists independent of the body and of the material world. In his *Meditations* he reasons away his body and the material world and finds that he is still conscious. It is a question whether there would be obtained the same results were they actually taken away. But, as above pointed out, he avoids empirical investigations on these questions.

If Descartes's demonstrations were intended, as he tells us, to conquer non-believers by making matters of faith more intelligible to them, he failed in his purpose. Descartes's demonstrations are too weak to convert non-believers and despite his demonstrations even believers will have, just as before, to repeat with St. Anselm "*Credo ut intelliga*

[14] *Objections et Réponses, Oeuvres*, Vol. IX, p. 159.

Descartes himself saw the obscurity of his demonstrations of the existence of God and of the soul. He justifies the failure of his demonstrations of the immortality of the soul by the fact that he had never intended to prove the soul's immortality. All he proposed to do, in order to comply with the demands of religion, was to prove the distinction between the soul and the body.[15] He, therefore, did not say anything concerning the fact that the soul, being in union with the body, may act with it and part with it.[16]

As to the demonstrations of the existence of God, he admits their awkwardness and confesses his mistake in supposing that things which had become clear to him only through habit of thinking them in a certain way would appear as clear to others. He advances various reasons to excuse the failure of his demonstrations. In the *Discourse* he could not adequately enough elaborate the arguments for God's existence on account of lack of time, for he had not decided to treat this subject until the very last moment before publication and, therefore, was hurried by the publisher.[17] Another reason, which he considers the main one, is the fact that he refrained from considering the reasonings of the skeptics on this point and did not say all the things that were necessary "*ad abducendam mentem a sensibus.*" [18] Moreover, he says that his demonstrations concerning the existence of God are intelligible only if one understands his reasonings concerning the incertitude of our cognition of the material world if there is no God. This reasoning, it seems to me, nobody understands. He did not want, however, to include these arguments in a book which he intended for everybody, even for women. But did these arguments, which were sufficiently worked up in his later work, the *Meditations*, throw much light on the question of God's existence, or rather more obscure it?

Are the reasons advanced by Descartes actually the reasons for his failure? Does the mistake lie only in the negligible treatment of the problems? Was it not rather on one hand the general defect of his method and on the other the neglect to consider whether the failure

[15] "L'une desquelles (one of the characteristics of the soul) est qu'elle pense, l'autre, qu'étant unie au corps, elle peut agir et partir avec lui; je n'ai quasi rien dit de cette dernière, et me suis seulement étudié à faire bien entendre la première, à cause que mon principal dessein était de prouver la distinction qui est entre l'âme et le corps; à quoi celle-ci seulement a pu servir, et l'autre y aurait été nuisible." *Corr.*, Vol. III, p. 664.

[16] "Je ne saurais pas demontrer que Dieu ne la puisse annihiler, mais seulement qu'elle est d'une nature entièrement distincte de celle du corps, et par consequent qu'elle n'est point naturellement sujette à mourir avec lui, qui est tout ce qui est requis pour établir la Religion; et c'est aussi tout ce que je me suis proposé de prouver." *Corr.*, Vol. III, p. 266.

[17] Il est vrai que j'ai été trop obscur en ce que j'ai écrit de l'existence de Dieu dans ce traité de la Méthode . . . Ce . . . vient en partie de ce que je ne me suis résolu de l'y joindre que sur la fin, et lorsque le Libraire me pressait." *Oeuvres*, Vol. I, p. 560.

[18] *Id.*, Vol. I, p. 560.

of his predecessors to solve these problems lay in the defect of the syllogistic method only or in the nature of the problems themselves?

Discontented with the scholastic method of inquiry which led to knowledge that lacked complete certainty, Descartes looked for another to give him the certainty of mathematics in all branches of knowledge. He, therefore, built a new method on the principles of mathematics. The result is that his method displays all its excellence when applied to mathematics, as is exemplified in the essay, *Geometry*, where, he says, using his method he succeeded in solving problems in a much shorter way than had been done before him; but it falls short in its application to other sciences which are concerned with existences, and where the investigation of ideas leads to no results. The reason is that in his method, which was intended for universal application, Descartes committed the error of not discriminating between existential and logical truth. In the first rule of his method he speaks of truth without stating what kind of truth. This general defect of his method reflects on the treatment of the traditional problems also. In applying this mathematical method to these problems, he handled supposed facts as ideas; and so even if the conclusions as to the existence of the supposed facts with which the traditional problems deal were legitimate logically, they would be no proof of the actual existence of these facts. For no matter how clear and distinct our ideas are, they are by no means a guarantee that the facts, for which these ideas stand, exist, and, therefore, a mathematical method can never solve an existential problem. "Indeed, one of the greatest philosophical discoveries of all times seems to have been made, and made in the nineteenth century, namely, the discovery that mathematics is a non-existential science, and this discovery we owe not to the epistemologist, but to the philosophical mathematician." [19]

It is interesting to note that Descartes conceives that logic makes no existential discoveries in the case of the triangle, but fails to see this when the existence of God is concerned. His method is an improvement on the scholastic method only in so far as its first rule is directed against authority and tradition; but this rule of his method is disregarded in the treatment of the traditional problems in the very fact that he treats them at all. Aside from this rule, Descartes's method does not carry us a step further in the study of facts than did the old method against which he protested. On the other hand, if Descartes's improved method had shown itself satisfactory for the inquiry into facts, its application to the traditional problems would have brought us no better success. His mistake was not only that he applied a

[19] *The New Realism*, p. 85.

mathematical method to the study of supposed facts, but also that he did not stop to consider the character of the problems when he was asked to give a logical demonstration of matters of belief. A due consideration of these problems would have revealed to him the fact that their nature is such as to guarantee no success even if most carefully studied by means of the most perfect dialectic. Descartes was aware that he could discover nothing in this field by means of the senses. Therefore, he carefully discarded the senses as not reliable when he betook himself to the treatment of these problems, though the senses were reliable enough to study the world, and he began the search of the knowledge of God by the inspection of his own mind, for this is, as he justly remarks, the only place where knowledge of God can be obtained, even according to the Holy Scripture.[20] What he found there is nothing but what he had been taught of Him. Descartes does not pretend to conceive anything of God, but states that he affirms only what he knows about Him, and he evidently knew no more about Him than the theologians knew.

3

The failure to solve these problems does not, however, have any bearing on the rest of his philosophy. This is due to the fact that these problems are in very loose connection with the entire scheme of his system, so that even a complete omission of them would not make his system suffer any lack. Despite the fact that these problems are usually taken to be the main topics of Descartes's philosophy, a close study of his system makes it obvious that his whole philosophical scheme does not justify the significance ascribed to these problems. The existence of God and of the soul are made useless from the point of view of his science. Though Descartes asserts that the demonstrations of God's existence gain clearness when it is understood that His existence is necessary to assure us of the reality of the occurrences and facts of the material world, he does not show the necessity of God's existence in the development of his scientific ideas concerning the material world. The world being represented as a self-moving mechanism where all phenomena are interconnected by necessary laws and where every effect has its natural causes, there is no place in it for divine grace or providence. All functions of life being described in natural terms, the soul is made superfluous.

Considering Descartes's scientific ideas of the world and man it is obvious that the traditional problems of the existence of God and of

[20] Preface to the *Méditations*, *Oeuvres*, Vol. IX, p. 5.

the soul are no natural outgrowth of his philosophical scheme. There arises, then, the question, what called forth the discussion of these problems. The answer to this question we find explicitly stated by Descartes in the preface to his *Meditations* where the motive is described as a purely religious one. His purpose was, he tells us, to demonstrate by natural reason, for the sake of the atheists and infidels, religious truth which the believer accepts on faith only. For, he says, the teachings of the Holy Scriptures are not convincing enough to unbelievers who may, perchance, look at such teaching which says that we must believe in God because it is so taught in the Scripture, and believe in Scripture because it comes from God, as reasoning in a circle, and, therefore, they need better demonstration.[21]

As to the soul, he says, he attempted to prove only what is necessary to establish and maintain religion, *i. e.*, the soul's distinction from the body, for the reason that the Lateran Council condemned the opinion, held by many, that the nature of the soul can not be easily discovered or that reason even leads to the conclusion that it perishes with the body, and entreats all Christian philosophers to prove the contrary.[22] These beliefs in the existence of God and the soul, he further says in the preface to the *Meditations*, are necessary for the maintenance of morality. Since vice is often better rewarded than virtue, many would be inclined to do what is profitable rather than what is right, if there were no God or no punishment to be feared in the after-life. This provokes the question why such considerations should have made him treat the traditional problems. For according to his fundamental principle of morality right actions are made dependent on nothing else than thoughtfulness and knowledge. But these considerations did not make him take up these problems on his own account. People interested in these questions of theology asked him to demonstrate these matters by the method with which he was successful in the sciences.[23] At first he hesitated, declaring that the universal belief in God was proof enough of His existence and that, therefore, an individual ought not to undertake to convince unbelievers by trying to demonstrate it to them, unless he were sure really to conquer them.[24] Moreover, he did

[21] *Méditations*, Dedication.

[22] Preface to the *Méditations*, *Oeuvres*, Vol. IX, p. 5.

[23] "D'autant que plusieurs personnes ont désiré cela de moi, qui ont connaissance que j'ai cultivé une certaine méthode pour résoudre toutes sortes de difficultés dans les sciences; méthode . . . de laquelle ils savent que je me suis servi assez heureusement en d'autre rencontres; j'ai pensé qu'il était de mon devoir de tenter quelque chose sur ce sujet." *Méditations*, *Epître*, *Oeuvres*, Vol. IX, p. 6.

[24] "Le consentment universel de tous les peuples est assez suffisant pour maintenir la Divinité contre les injures des Athées, et un particulier ne doit jamais entrer en dispute contre eux, s'il n'est très assure de les convaincre." *Oeuvres*, Vol. I, p. 182.

not take up these problems until just before the publication of the *Discourse.*

Thus, despite Descartes's plea for a naturalistic philosophy and his setting out on this new path, he returned to the old with which he had broken and dealt with the traditional problems for which his scientific ideas had left no justified place.

CHAPTER IV

EXPLANATION OF THE CONFLICT BETWEEN DESCARTES'S PROGRESSIVE THINKING AND TRADITIONS

I

A close and systematic study of Descartes's system leaves one with the impression of double *bookkeeping*. On nearly every point of his philosophy he gives us two views which are almost directly opposed. He builds a universe first on mechanical and then on supernatural principles; he gives us a scientific system which excludes God's existence and the existence of a soul, and then goes ahead and proves their existence; he assumes a radical theory of conduct which discards authority and tradition and with it he accepts provisional rules which are based on authority and tradition. Side by side with his scientific views which are progressive, but irreligious, he holds traditional views which are religious, but unscientific. There is in his philosophy a conflict between progressive thinking and theology, a conflict which can not be explained by inconsistency on the part of Descartes; he seems, notwithstanding, to be consistent. The scientific views with which he began are carried through to the very last and are preserved in his works even where the contrary views are introduced. The conceptions of his earlier works, of the treatises on the world and man, are preserved alongside of the traditional ideas in his later works on the *Principles* and the *Passions*. This persistence on the part of Descartes helps us to sift his genuine philosophy from secondary admixtures. What requires elucidation is the way in which the admixtures came into his philosophy. Descartes speculated about first principles, although he thought such speculation to be of no moment for the acquisition of useful knowledge, which he considered to be the mission of philosophy; although even in the preface to the *Principles*, he still pointed to the fruitlessness of an inquiry into first causes,[1] as exemplified by the failure of great minds like those of Plato and Aristotle and

[1] "Or il y a eu de tout temps de grands hommes qui ont taché de trouver un cinquième dégré pour parvenir à la Sagesse, incomparablement plus haut et plus assuré que les quatre autres; c'est de chercher les premières causes et les vrais Principes dont on puisse déduire les raisons de tout ce qu'on est capable de savoir; et ce sont particulièrement ceux qui ont travaillé à cela qu'on a nommés Philosophes. Toutefois je ne sache point qu'il y en ait eu jusques à présent à qui ce dessein ait reussi." Preface to *Principes*, *Oeuvres*, Vol. IX, p. 5.

their followers; and although in the same preface he still emphasized the validity of only such a philosophy as gives us scientific knowledge, indicating his preference for knowledge obtained by the senses to opinion supported only by dialectic.[2]

The development of Descartes's thought in his works can be understood only if we study his philosophy in the light of his time and examine the conditions under which he wrote. An insight into the history of the dogma, politics, and social conditions of those days explains to us much of the peculiar course which the development of his philosophy took.

Descartes lived in a transition period, a time of conflict between the old and the new orders. The majority constituted, as it usually does, the conservative element of those days. Authority was still believed by the majority to be the criterion of truth. The Renaissance, which had set out, as it were, to bring about emancipation from authority, had, in fact, only substituted one authority for another, the authority of the ancients for the authority of churchmen. Though the great ardor for historical research of the sixteenth century had considerably decreased in Descartes's time, the interest in antiquity as the original and most reliable source was still alive. This interest was kept up particularly by the religious controversies of those days. Both the Reformers and the Catholics had recourse to history to prove the agreement of their assertions with the primitive church. Both went back to their sources —the Protestants, appealing to the authority of God's word; the Catholics, appealing to the old authorities of the church. The majority was not yet ripe for the more radical doctrines brought forth by Descartes and his progressive contemporaries. The new spirit that had awakened with the Renaissance and had led up to the Reformation had only shaken the conceptions inherited from the Roman Empire and persisting through the middle ages, but had not wiped them out altogether. The traditions of the Holy Roman Empire were too deeply rooted to be at once completely extinguished. The air was still full of them throughout the modern period up to the Westphalian peace which is

[2] "Ainsi toute la Philosophie est comme un arbre, dont les racines sont la Métaphysique, le tronc est la Physique, et les branches qui sortent de ce tronc sont toutes les autres sciences, qui se réduisent à trois principales, à savoir la Médecine, la Mécanique et la Morale, qui, présupposant une entière connaissance des autres sciences, est le dernier dégré de la Sagesse." Preface to *Principes, Oeuvres*, Vol. IX, p. 14.

"Or comme ce n'est pas des racines, ni du tronc des arbres, qu'on cueille les fruits, mais seulement des extrémités de leurs branches, ainsi la principale utilité de la Philosophie dépend de celles de ces parties qu'on ne peut apprendre que les dernières." Preface to *Principes, Oeuvres*, Vol. IX, p. 15.

"Et il me semble que toute la Sagesse qu'on a coutume d'avoir n'est acquise que par ces quatre moyens; . . . Le premier ne contient que des notions qui sont si claires d'elles mêmes qu'on les peut acquérir sans méditation. Le second comprend tout ce que l'expérience des sens fait connaître. Le troisième, ce que la conversation des autres hommes nous enseigne. À quoi on peut ajouter, pour le quatrième, la lecture." Preface to *Principes, Oeuvres*, Vol. IX, p. 5.

regarded as having brought about a complete extermination of those ideas by its regulations of religious rights and by its settlement of the question of imperial authority. This peace, however, was concluded only three years before Descartes's death. In his time the traditions of the Holy Roman Empire were still alive. He was the witness of the endless struggles of these old traditions against the new spirit. All the political struggles, which had originated or become complicated through the Reformation and the counter-Reformation at home and abroad, took place during his life. Religious controversies were still going on. Two years after Descartes's birth the Edict of Nantes was issued; it did not, however, accomplish its purpose. The struggle between Reformers and Catholics was carried on even after its declaration. The Edict had not yet been incorporated when the Catholics protested, and the government after useless threatenings had to make various restrictions which practically withdrew the rights granted to the Reformers. The mutual hatred was increased and led to endless struggles.

The Reformation was limited rather to a change of church doctrines. It was no real, intellectual emancipation as it is often claimed to be. The minds both of Reformers and of Catholics were practically on the same level of development; whichever party had the power in its hands tried to suppress the other. The orthodox party was the stronger. Despite the rapid spread of the doctrines of the reformers in the sixteenth century, the majority of the people in France were Roman Catholics. The attempts at reform were followed by a strong Catholic reaction. The counter-Reformation led to an outbreak of great religious ardor accompanied by austerity and asceticism. Not only were the masses very religious, but the majority of the higher classes was firmly orthodox. The great number of churches and convents erected at that time testifies to the great religious enthusiasm which surpassed that of all other centuries. While there were no cloisters for women in the sixteenth century, a considerable number arose in the first half of the seventeenth century. The greater number of French Catholic organizations and orders date from that time. There was established in every diocese a seminary for the preparation of good priests. The Catholics made every effort to regain the masses by means of missions and organizations. They conducted a propaganda on a large scale. The Jesuits and other religious orders had their missionaries in different parts of the kingdom expounding the Catholic teachings in the streets and in the market-places. The outbreak of fanaticism was so great that a particular order was formed—the "Compagnie du Saint-Sacrement"—which carried with great pomp the holy sacrament, exposing

it in squares and halls whenever there was a gathering of the masses. Spying was part of the duty of such holy orders. One had to be very careful in one's speech. The slightest freedom caused atheism to be suspected. This suspicion was not, however, groundless. Free-thinking had begun to manifest itself. To combat infidels there was formed a Christian militia, that dreamed of extending the holy armies all over Europe.

Never before had the clergy had such strong influence in France. Priests and theologians had never held so many state positions as in the beginning of the seventeenth century. The king consulted them in his affairs. They were the leaders in education. Since 1623 the "Oratory" devoted itself partly to the instruction of youth, but education was chiefly in the hands of the Jesuits. In the province of Paris alone the number of pupils, divided among twelve colleges and one grammar school, amounted to 13,195. The instruction in these schools was such as to develop sentiments favorable to the monarchy and to the dominant church. The students were trained to complete obedience and submission to authority. The cult of the Virgin in these schools prepared young people for the different congregations devoted to the service of the Virgin which they entered on leaving college. It was not unusual for young men and women, sons and daughters of aristocratic families, to devote themselves to the cultivation of religious ideals. The members of these congregations were to serve as examples of pious devotion and austerity to their other college comrades by laboring for the salvation of souls and conversion of heretics. A story connected with the foundation of Port-Royal illustrates how deeply religious ardor had penetrated the youth. Arnauld, a Jansenist and the representative of the University against the Jesuits, had named his little girl of nine years coadjutrix of the abbess of Port-Royal. When the abbess died the coadjutrix followed her in the office. At the age of eighteen she one day imagined that prayers had revealed to her that a true Christian life was entirely different from the easy life which she led. She decided to part completely with the world, to retire further into seclusion, and to accept stricter rules. When on the appointed day her father came to see her as usual, he could speak to her only through the gate. Neither requests nor threatenings could move her to change her decision.

Such religious enthusiasm led to great intolerance, which became so extreme that the government, itself very conservative and prejudiced, had often to intervene to decrease it. The masses were not yet prepared for freedom of conscience and tolerance of belief. They still held the traditional idea, one country and one religion, and worked

systematically for the extirpation of all heresy. The most widely spread and, therefore, most persecuted heresy was Protestantism. The Catholics made repeated attempts to put the Protestants out of existence, subjecting them to all kinds of oppression and restrictions. Protestants were repeatedly attacked, their churches burned, and their people executed. The Catholics, whose teachings were compatible with political and social conservatism, had the support of the government in their fights against dissenters. The government which had provisionally accepted religious tolerance was hostile to the reformers on account of their belief in the legitimacy of individual examination. Nobody in France at that time had the right to act or even to express himself concerning matters of state or religion, unless the particular position which he held authorized it. There were two duties imposed upon every subject of the state—to be religious and to obey the ruler. After the assassinations of Henry III and of Henry IV the reaction in France was very strong. Under Louis XIII, when Cardinal Richelieu was practically ruler, there was a tendency towards absolutism which reached its climax in Louis XIV. Louis XIV, a devoted adherent of the church, believed in a kind of exchange between himself and God, and because of the "divine rights" granted to him by God, was anxious to serve Him by demanding adherence to orthodox beliefs. Dissenters from orthodoxy were exposed to great disadvantages. Protestant schools, where free arts and sciences were taught, were suppressed. Protestants were for a time even prohibited from publishing books. They were not allowed to send their children abroad to study, even when there were no vacancies in the few schools where Protestant children were tolerated. The reason for this prohibition was the fear that the children might be taught maxims which would interfere with the loyalty due to the Catholic country in which they were born. The parliament rendered assistance in the persecution of heresy. The assembly of the clergy did its best in stirring the emperor against dissenters, calling his attention to the fact that he must do something for God, who had done so much for him, and express his gratitude by extirpating all kinds of heresy. They repeatedly asked the king to take away from his subjects the claimed liberty of conscience and to put them to the happy necessity of always being faithful. In 1651 they sent to the king the following petition: "Nous ne demandons pas, Sire, à Votre Majesté, qu'elle (Assemblée générale du Clergé) bannisse de son royaume cette malheureuse liberté de conscience . . . parce que nous ne jugeons pas que l'exécution en soit facile, mais nous souhaiterions au moins que ce mal ne fît pas de progrès . . ."[3] The

[3] Lavisse, *Histoire de la France*, T. VII,[2] p. 44.

bourgeoisie and the aristocracy, who as a rule belong to the conservative party, naturally supported the orthodox church in its fight against heresy. The oppressions and persecutions succeeded in decreasing considerably the dissensions; it was impossible, however, to remove them altogether. The new spirit, a natural development of conditions and time, could not be killed as easily as individual dissenters or even masses of them.

The state of affairs in France at that time was very complicated. In addition to its fight against reformers, the Catholic church itself was divided by the Jansenist movement. This movement, like any other ideal which sprang up in those days, was condemned and persecuted. The development of intelligence so emphasized by the Jansenists, was against the interest both of the monarchy and of the church. Conditions in France were yet more complicated by the question of the relations of the king, the Pope, and the Church. The king, believing that he held his office directly from God and that absolute monarchy was his "divine right," fought against the infallibility claimed by the Pope on account of his divine ordinance. They were in constant opposition. This again put the church in an embarrassing situation, for it had to obey both the Pope and the king. The absolutism claimed by the king on the basis of his "divine rights" raised again the question of his relation to the church as her son.

Of these discussions the purely theological question raised by the Reformation and the counter-Reformation stands out most conspicuously. It constituted the main interest of that time, overshadowing all other questions. It was the leading point by which all expression of thought was measured and which complicated all other queries. In addition to this, loyalty to the monarchy was carefully watched. One had to be careful not to be accused of disloyalty to the monarchy, of Protestantism, Calvinism, atheism, or any other "heresy," and also not to get into conflict with the doctrines of the reformers. An impartial judgment was almost impossible. The situation had a deadening influence on the intellects of that time. Literature, science, and art were neglected. Only in the latter part of the seventeenth century did the value of science begin to be realized. Louis XIV showed himself kindly disposed to science and art, and protected research and learning; but this was only at the very end of Descartes's life. His time was very unfavorable for progress of any kind.

The foundation of the Catholic church, which was, of course, the dominant institution, being the perpetuity and persistency of its doctrines, the slightest innovation was checked. The main instruments for the removal of dissensions—the Inquisition, the Index, and the Jes-

uits, were still freely used in Descartes's time. All publications were under the control of the Congregation of the Index. Whatever breathed novelty was suspected. Whatever tended to weaken the claims of the orthodox church was suppressed. Every new work, whether on cosmology, physics, physiology, or even medicine, was criticized from the viewpoint of theology or Aristotle, whose doctrines were interpreted as favorable to the church. A disagreement with accepted beliefs in theology or approved authors brought opposition and persecution. The condemnation of Copernicus and Galileo exemplifies the ecclesiastical attitude toward scientific inquiry. Experiment and examination, the main instruments of science, were excluded by the very assertion of Catholicism. Bossuet, in a work concerning the Catholic Church written in Descartes's time, praises its faith in tradition and argues against the method of examination on the ground that, if one were to examine the thing before believing it, he would have to begin with the question whether God exists; and such inquiry, he feared, might easily lead to the denial of God's existence. A good Christian is one who believes before he examines his belief, and, to quote Bossuet, "il croit tout avant que d'avoir lu la première lettre et que d'avoir seulement ouvert le livre," [4] *i. e.*, the Holy Scripture. The fear of reason in that time is typically characterized by Boileau in his interesting *Arrêts*. Boileau represents the court as examining a request of the University in which justice is invoked against the unknown lady, called Reason, who for several years had been forcing herself into the above University. She is accused of having caused vexation by attributing to the heart, without Aristotle's approval, the duty of making the blood flow with full force all over the body and circulate with impunity through the veins and arteries. This assertion she is said to have made on no other grounds than that of experience, the authority of which has never been recognized in the above University. After a due consideration of the request, the court ordered that Aristotle should always be followed and taught by the doctors, masters of art, and professors, who for this purpose are not obliged to read him to know his language and ideas. The blood was prohibited from carrying on its movement with impunity under the penalty of being completely delivered over to the faculty of medicine.

Where the belief in authority was still so strong and widespread, the newly discovered microscope had not much chance to render its services. Laboratory research was very backward. Except a few astronomical observations there are hardly any worthy of mention. Consequently, sciences which required laboratory research were not devel-

[4] Quoted by Lavisse, *Op. Cit.*, Vol. VII[2], p. 53.

oped. In zoölogy people still believed in the preformation theory. Chemistry was not yet freed from alchemy. The belief in astrology was still extant; the stars justified their existence by their influence on man's destiny. In anatomy Aristotle's opinions continued to be respected. Medicine had made no great discoveries either. This could hardly be otherwise in a time when there was more stress laid on the fact that the practitioner should be a good Catholic than a capable physician, and when this profession was temporarily prohibited to those who did not belong to the orthodox church. Moreover, the college preparation was not adapted to the training of scientists. The course was exclusively formal, and scholastic methods were still practised. To some sciences, however, the time was more favorable than to others, namely, to those which were less liable to interfere with accepted political and religious beliefs. Mathematics was highly developed. The syllogistic exercises of scholasticism were evidently a good preparation for this branch of science which uses the same method as the one used by scholastic sciences—that of abstract reasoning. France became the meeting place of all great mathematicians, and discoveries of great importance were made. Descartes's analytical geometry, Leibnitz's and Newton's infinitesimal calculus date from that time. Geometry was being applied even to matters of physics, as, for instance, by Galileo, and later by Hobbes. This over-emphasis on mathematics in the search for truth explains Descartes's error in falling back into the scholastic method, which he had combatted; he often employed the mathematical method in the study of existential truth. Pleading for the importance of experience and observation in the study of nature, he still often substituted logical truth for facts. A logical demonstration concerning facts of nature was sometimes taken by him to be the evidence for those facts. Thus, the fact that we can infinitely divide a body in imagination was used to prove that that body is in reality infinitely divisible. He approved of Galileo for using the mathematical method in his physics, and disapproved of Bacon for saying that mathematics is the servant and not the master of physics.

Though the opposition of the church and state to all innovation made the progress of science very slow, it could not stop it altogether. There were minds already affected by the germ of progress, cultivated in the preceding centuries. The utility of science had been realized by them. Divine revelation no longer filled such minds with expectations. There were attempts on the part of men to become through their own efforts masters over nature, of which philosophy was to give the explanation. Huygens was not the only one of his time who believed that philosophy is to give "les connaissances des causes de la

nature." The definition of a philosopher of those days, which we find in the Dictionary of the Academy, shows how closely philosophy was associated with science. A philosopher is defined as "celui qui s'applique à l'étude des sciences et qui cherche à connaître les effets par leurs causes et par leurs principes."[5] Philosophical research was part of the work of the Academy of Science. At that time man aspired in France to a philosophy which would give the explanation of all physical phenomena, enumerated by Huygens—weight, light, coldness, heat; which would disclose the compounds of air, fire, water, and of all other bodies; which would show how metals, stones, and grass grow; what the service of respiration to animals is; and through which a knowledge of all other things, of which the world knows little, but which would be very useful to know, could be obtained.[6] Experiments on these phenomena were to give the foundation for a philosophy.

There was a pronounced tendency towards a naturalistic philosophy, but it was suppressed at its very outbreak. Naturalism was not judged from the point of view of its own merits; religion was the fundamental interest, and the first question was, What is its relation to religion? It was found guilty of looking for truth by a different method from the one religion used, and was thus condemned not as a sterile method in philosophy, but as a dangerous rival to religion in searching for truth. The main check to naturalism was the fact that it was associated with atheism. "It is to be feared that the last heresy should be, if not atheism, at least a declared naturalism," wrote Leibnitz. Now atheism was not only against the interest of the church, but also that of the government which maintained the "divine rights" of kings; thus, atheism was fatal to the whole social order. Naturalism was, therefore, persecuted like any other heresy. Imprisonment and the stake were its rewards. The philosopher of nature was burned at the order of the parliament in Toulouse. The poet Theophile de Viau barely escaped the same fate, having been imprisoned by the parliament of Paris. Such measures were very effective. Naturalism was checked while in its embryonic stage. The best illustration of this is Descartes who, as has been said, did not feel any call to martyrdom.

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The orthodoxy of the day had a deterrent influence on Descartes's original tendencies and gave the development of his system its peculiar direction. Naturalistic and practical at the outset, it became under the stress of circumstances rationalistic and idealistic. His first works,

[5] Lavisse, *Op. Cit.* [6] Lavisse, *Op. Cit.*

Le Monde and the other scientific treatises, and his own account of his procedure in the *Discourse* bear testimony to the fact that he started out as a naturalist, and that the natural was emphatically marked off from the supernatural. Despite the naturalistic philosophy of his first treatises, which Descartes thought the only philosophy worth while, we find, in the *Discourse*, the *Meditations*, and the *Principles*, side by side with it the idealistic and theological problems which were excluded by his scientific system. But in that time of theological controversies when the Bible was the source of verification of all truth, it was impossible for the philosophers to keep away from theology undisturbed. No matter how hard Descartes struggled against dealing with theological problems he did not succeed in laying aside the "divine learning", as did Bacon. He first ignored religious questions of the day, but they were forced upon him by the criticism of his writings. The first question of his critics was where his writings stood on this or that point of religion. The central problem around which all reformatory doctrines turned was the theory of the Eucharist. The decision of the Council of Trent concerning the sacrament was a very important point, and every publication that pretended to be orthodox had to reckon with it. Descartes carefully avoided this topic in his physics, but was brought to the discussion of it by the inquiry concerning the relation of his philosophy to it. "How do you reconcile your philosophy with the theory of the Eucharist?" Arnauld asked him. If the church teaches us to believe the presence of Christ not in actual body during the sacrament, how does the theory which maintains the identity of body and extension explain "what is most sacred to the world?" [7] Thus Descartes, having given no place to this purely theological question in his works, was forced to the discussion of it in his answers to these objections, where he was anxious to show that his philosophy agreed with the decisions of the Council of Trent.[8]

Descartes had met with unfavorable criticism even before the appearance of his works; his doubt and renunciation of all authoritative doctrines were known before the publication of the *Discourse* and aroused suspicion against him. He, therefore, made it his business to guard against conflicts with orthodoxy. Having left Paris, he kept track of all social occurrences which took place there in his absence and regulated by them his undertakings. "Je n'ai pas juré de ne permettre point que mon *Monde* voie le jour pendant ma vie; comme je n'ai point aussi juré de faire qu'il le voie après ma mort; mais j'ai dessein, tant en cela qu'en toute autre chose, de me régler selon les occurrences, et de suivre, autant que je pourrai, les conseils les plus surs et les plus tranquilles," [9]

[7] *Oeuvres*, Vol. V, p. 190. [8] *Corr.*, Vol. III, p. 349. [9] *Oeuvres*, Vol. II, p. 552.

he wrote to Mersenne. The latter kept him informed as to the appearance of new books, new inventions, and new experiments, and of the attitude of the learned of the school towards them and of their controversies. Descartes was particularly anxious to know the rumors concerning himself [10] and was very much impressed by those which were hostile to him. They often influenced his enterprises and led him to greater caution in the expression of thought, which was already restricted enough, as is seen from his following words: "J'ai vu encore ces jours un livre qui me donne occasion d'être dorénavant beaucoup moins libre à communiquer mes pensées que je n'ai été jusques ici." The rumors that followed his doubt of generally accepted beliefs were the stimuli which caused him to undertake the search for first principles when he would not otherwise have "ventured so soon" on it. Both the *Meditations* and *Principles* were written and published to meet objections to his heterodoxy. The rumors which had spread in theological circles concerning the heterodoxy of his philosophy made him take up problems of reconciling his physics with the Holy Scriptures. Seeing that despite his precautions his philosophy was found unfavorable to theology, it dawned upon him "like a miracle" [11] to expound his new philosophy in such a way that it would show agreement with the truth of religion. Before so doing, however, he applied to his friends, Catholic theologians, in order to find out definitely the determinations of the Council of Trent concerning matters upon which his philosophy touched; [12] he thus was inclined to adapt himself to the directions of the Council of Trent. His original plan, to follow in his conclusions his own unbiassed reasoning only, was neglected at the thought of possible persecutions. The exposition of his theories was directed by his desire to have "Rome and Sorbonne on his side." Theological interests were carefully taken into consideration; "Je prends soigneusement garde à ne pas mettre la moindre chose dans mes écrits que les théologiens puissent censurer avec raison." [13] To succeed better in that, he willingly followed the suggestions of his critics, who were theologians. In a letter to Mersenne we hear that Descartes corrected his metaphysics in accordance with the objections of Arnauld, a Catholic theologian. The only reason for these corrections was to show his deference to Arnauld's criticism and, thus, to induce other theologians to

[10] "Mais je me promets que vous me continuerez toujours à me mander franchement ce qui se dira de moi, soit en bien, soit en mal, et vous en avez dorénavant plus d'occasion que jamais, puisque mon livre est enfin arrivé à Paris." *Oeuvres*, Vol. I, p. 485.

"Si par hasard vous rencontrez quelqu'un qui parle de moi, et qui se souvienne encore que je suis au monde, je serai bien aise de savoir ce qu'on en dit, et ce qu'on pense que je fasse et où je suis." *Oeuvres*, Vol. I, p. 135.

[11] *Lettres*, Vol. II, p. 164, Ed. Clerselier.

[12] *Lettres*, Vol. II, pp. 164 and 481, Ed. Clerselier.

[13] *Objections et Réponses*, *Oeuvres*, Vol. II, p. 74, Ed. Cousin.

express their opinions to him freely, before the publication of his works.[14]

The fact that he sent his writings to the faculty of theology of the Sorbonne and to the Jesuits for examination before their publication is proof enough that religion and accepted beliefs and customs of the country were taken into consideration in the exposition of his doctrines. For the faculty of theology in Paris, the center of all theological sciences, was one of the most conservative institutions. It stood for the Catholic cause with fanatic ardor. It worked for the preservation of orthodoxy in science just as the Pope and the bishops worked for the preservation of orthodoxy in the church. Its mission was to "déterminer et décider tout le dit affaire, en l'honneur de Dieu, exaltation de la foi catholique et extirpation de cette hérésie luthérine, qui commence fort à pulluler par deçu."[15] The faculty of theology together with the French parliament was the instrument of which the government made use for its fanatic purposes. When in 1624 there was issued an edict prohibiting the teaching of anything but Aristotle or approved authors, it was welcomed by the conservative faculty, which several years later even asked for a renewal of it. The Jesuits, again, as an order subservient to the orthodox church, were on their guard against whatever was destructive of orthodoxy, and on account of their great influence in educational circles could easily prevent a hearing of a new theory that they did not find sufficiently orthodox.

Such were the censors which Descartes's works had to pass. Both the faculty of theology and the Jesuits were to a great extent responsible for the direction the expression Descartes's thought took. It was of great import to him to have their approval. This, however, could be obtained only through loyalty to orthodoxy, and he attempted to give his works at least the appearance of such loyalty. God is always brought to the front. He is introduced as a sort of appendix to every argument whether or not room is left for Him. Descartes represents the world as a mechanism, ever moving, where events take place by the operation of constant laws, and he refers to God for original and continual creation. He postulated from the scientific point of view a constant amount of energy, and brings in God as the preserver of this energy. Matter is first supposed to have been ever in motion and then God is said to have put it in motion. In his theory of movement matter is responsible for irregular and circular movement, and God is

[14] Je vous envois enfin ma réponse aux objections de M. Arnaut, et je vous prie de changer les choses suivantes en ma Métaphysique, afin qu'on puisse connaître par là que j'ai déféré à son jugement, et ainsi que les autres, voyant combien je suis prêt à suivre conseil, me disent plus franchement les raisons qu'ils auront contre moi. *Corr.*, Vol. 3, p. 334.

[15] Lavisse, *Op. Cit.*, Vol. V¹, p. 356.

responsible for movement in a straight line. Into the cognition theory God is introduced to prove the existence of the external world, while the validity of our ideas was first proved by the argument that there can be no idea without an external object as its cause. There are innumerable other instances where God is introduced without giving additional weight to the theories. The very problems of the *Meditations* are only additional arguments, which do not contribute anything to clearing up Descartes's philosophical position. At best they only testify that Descartes was a pious man.

Nevertheless, the objections made to his philosophy were from the point of view of contradiction to religion and its dogmas. Descartes pointed in vain to the fact that his philosophy was in accord with the determinations of the Council of Trent, and equally vainly asserted that he believed what he wrote.[16] Despite the fact that his first published works were those which were supposed to testify to his orthodoxy, his philosophy met with severe opposition. When Descartes thought, perhaps, to please the orthodox leaders by his attempt to give a rational demonstration of matters of faith, he only provoked them by his failure to justify faith by reason, which the keen eye of the theologians detected at once. His denial of authority and tradition and the search for a criterion of truth was unorthodox both from the Protestant and the Catholic points of view. The Protestants saw in his philosophy skepticism, atheism, destruction of the state and the University; the Catholics saw Protestantism, the most persecuted heresy, evidently, in the conformity of his theory of extension to the Calvinistic exposition of the doctrine of the Eucharist, and in the many points of resemblance to St. Augustine. Moreover, his method of examination was found to resemble that of the Jansenists, and his philosophy was, thus, associated with Jansenism. It was also found to contain elements of Pelagianism.[17] His theory of particles brought upon him the accusation of following Democritus. Furthermore, the doctrine of the motion of the earth was heretical.

His most pronounced opponents on the side of the Protestants were, in Utrecht, Voetius, a minister and theologian, and in Leyden, the whole faculty of theology, with Revius and Triglandius, first professor of theology and a former minister, at the head, and in Groningue, Schokius, a disciple of Voetius. Voetius and Triglandius worked very ardently to destroy Descartes's philosophy. They aroused all the professors of the theological faculty against him and tried to form a sort of league to oppress him by all manner of "calumnies." They resorted to all available means in order to arouse the synod and the

[16] *Corr.*, Vol. III, p. 349. [17] *Corr.*, Vol. III, p. 544.

magistrates against his teachings as against doctrines dangerous to the university and to the state. Triglandius found Descartes's *Meditations* a "thèse dangereuse, thèse toute nouvelle et contraire à Aristote." [18] Voetius wrote seven theses against Descartes which he tried to publish under different names in different places, so as to make it appear that Descartes had many opponents in many places. The three corollaries which he added to his theses illustrate how Descartes's philosophy was criticized, and what was most effective in those days in creating enemies of new thought. They were directed against an atheist, by whom Voetius meant Descartes, whose name he did not mention, however. These corollaries state that the opinions held by the atheist Taurellus and David Gorlaus, concerning the fact that man being composed of body and soul is an accidental being and not a being in itself, are erroneous; that the theory of the movement of the earth introduced by Kepler and others, is directly and evidently opposed to the authority of the Holy Scripture and does not agree with the philosophy thus far taught; a philosophy which rejects the substantiality of form or of qualities, as maintained by the atheists Taurellus, Gorlaus, and Bacon, does not agree with the physics of Moses nor with anything else in the Holy Scriptures. Such a philosophy is favorable to skepticism and is very dangerous, for it is enough to destroy the belief in a rational soul, in the procession of the divine persons in the Trinity, in the Incarnation of Jesus Christ, in original sin, in miracles, in prophecies, in the grace of regeneration, and in the real possession of demons. Such reasons brought against a new philosophy were enough to arouse hatred, to the exclusion of all mercy, against it. Descartes even feared being brought before an ecclesiastical tribunal. His repeated requests addressed to the curators of the academies in Utrecht and in Leyden were without results. He even thought at one time of leaving the province. As soon as he got rid of one enemy he was attacked by another. Only a few days after his public triumph, through the thesis of Regius, his disciple, over an attack in Utrecht, he was again attacked in another thesis of the College of Clermont.

In view of all the objections brought against him, Descartes in despair exclaimed that the state of affairs was such that one should not reason at all or at least publicly declare that the theologians have a right to falsify statements made by others.[19] A public declaration against the theologians could hardly have been expected from Descartes or even from a more courageous person than he, at a time when

[18] *Corr.*, Vol. IV, p. 633.

[19] "L'affaire est maintenant en tel point, qu'il est nécessaire qu'on ne fasse raison, ou bien qu'on déclare publiquement que Messieurs vos Théologiens ont droit de mentir et de calomnier, sans que les personnes de ma sorte en puissent aucunement avoir justice en ce pays." *Corr.*, Vol. V, p. 42.

the theologians occupied such a prominent place. To stop reasoning was for Descartes equally hard. He, therefore, kept firmly to his decision to be masked before the world, a decision with which he had entered his philosophical career, as is evident from the following remark in his memoirs of 1619: "Comme un acteur met un masque pour ne pas laisser voir la rougeur de son front; de même, moi qui vait monter sur le théâtre de ce monde où je n'ai été jusqu'ici que spectateur, je parais masqué sur la scène." [20] The consequence of this is that we do not have Descartes's philosophy openly expressed in its true character. His free and radical thoughts, which he cherished as a progressive of his day, are always veiled in conservative covers. Knowing that the "main reason for rejecting . . . novelties in matters of philosophy was the fear lest any changes be caused thereby in theology," [21] he tried to hide the novelty of his philosophy, carefully introducing into his system as much of the old orthodox doctrines as would overshadow the new, and present at least the appearance of the "most ancient (thought) ever introduced into the world and of the most vulgar ever taught there." [22] He never freely and openly expressed what he considered to be the truth of the case, but always observed, rather, a double policy. He wrote and published books both for the "glory of God" and for the benefit of mankind. He concluded his *Principles* with an appeal both to the authority of the church and to reason.[23] His explanations for not having treated final causes, questions of morals, or different problems of orthodox metaphysics are such as to satisfy both the scientific and the religious mind. Thus he explained his neglect to investigate final causes on the one hand by the fact that final causes do not explain anything in nature, and on the other, that it is audacious to attempt to penetrate God's wisdom. One reason for not treating the question of good and evil is that this question is excluded from his philosophy as a problem of theology, and the other is "il n'appartient qu'aux Souverains, ou à ceux qui sont authorisés par eux, de se mêler de régler les mœurs des autres." [24] Would we not exclaim, what a contradiction to his fundamental view of conduct, if we did not know that it was one of the rules of the monarchy which later, according to a royal declaration of 1683, was even to be taught in

[20] *Pensée*, p. 3, *Oeuvres inédites*, Foucher de Careil.

[21] *Corr.*, Vol. I, p. 455.

[22] "J'ai tellement composé mes Principes, qu'on peut dire qu'ils ne sont point du tout contraires à la Philosophie commune, mais seulement qu'ils l'ont enrichie de plusieurs choses qui n'y étaient pas." *Corr.*, Vol. IV, p. 225.

[23] "Je soumets toutes mes opinions au jugement des plus sages et à l'autorité de l'Église. Même je prie les Lecteurs de n'ajouter point du tout de foi à tout ce qu'ils trouveront ici écrit, mais seulement *de l'examiner* et n'en recevoir que ce que la force et l'évidence de la raison les pourra contraindre de croire." *Principes*, Part. IV, § 207, *Oeuvres*, Vol. IX.

[24] *Corr*, Vol. V, p. 87.

all colleges? If it does not further explain or, rather, contradict his view of morality, it testifies, at least, to the fact that Descartes was a loyal subject of his country. Most characteristic of this double tendency is the following expression of his principles: "À savoir je ne doute point que le monde n'est été créé au commencement avec autant de perfection qu'il en a . . . mais néanmoins, comme on connaîtrait beaucoup mieux qu'elle a été la nature d'Adam et celle des arbres du Paradis, si on avait examiné comment les enfants se forment peu à peu au ventre des mères, et comment les plantes sortent de leurs semences, que si on avait seulement consideré quels ils ont été quand Dieu les a créés: tout de même, nous ferons mieux entendre qu'elle est généralement la nature de toutes les choses qui sont au monde, si nous pouvons imaginer quelques principes qui soient fort intelligibles et fort simples, desquels nous facions voir clairement que les astres et la terre, et enfin tout le monde visible aurait pu être produit ainsi que de quelques semences, bien que nous sachions qu'il n'a pas été produit en cette façon; que si nous la décrivions seulement comme il est, *ou bien comme nous croyons qu'il a été créé.* Et parce que je pense avoir trouvé des principes qui sont tels, je tacherai ici de les expliquer."[25] Another characteristic expression can be quoted on this point: "Je désire que ce que j'écrirai soit seulement pris pour une hypothèse, laquelle est peut-être fort éloignée de la vérité; mais encore que cela fût, je croirai avoir beaucoup fait, si toutes les choses qui en seront déduites, sont entièrement conformes aux expériences."[26]

The results of his research, whose novelty appears even through the cover of the conservatism with which it was veiled, were hidden from the world until after Descartes's death. His *Le Monde* never saw the day in its original form; his natural philosophy, as he himself said, was killed even before its birth.[27] He wrote *Le Monde* in the days when he looked only to experience to justify what he had reasoned out on the basis of observations. He was about to publish it when he heard of the condemnation of Galileo. After that nothing could make him give his work to the public. If the movement of the earth was declared heretical, he foresaw the same fate for his *Le Monde* in which he had essentially accepted the Copernican theory. Moreover, his explanation of things in *Le Monde* were so interconnected that the rejection of this theory, he thought, would lead to the rejection of the whole.[28] The

[25] *Principes*, Part. III, § 45; *Oeuvres*, Vol. IX. [26] *Principes*, Part. III, p. 123, *Oeuvres*, Vol. IX.

[27] Voici enfin les principes de cette malheureuse Philosophie, que quelques uns ont taché d'étouffer avant sa naissance. *Lettres*, Vol. III, p. 107, Ed. Clerselier.

[28] "Vous savez sans doute que Galilée a été repris depuis peu par les Inquisiteurs de la Foi, et que son opinion touchant le mouvement de la Terre a été condamnée comme hérétique. Or je vous dirai que toutes les choses que j'expliquerais en mon Traité, entre lesquelles était aussi cette opinion du mouvement de la Terre, dépendaient tellement les unes des autres, que c'est assez de savoir qu'il y en ait une qui soit fausse, pour connaître que toutes les raisons dont je me servais n'ont point de force." *Corr.*, Vol. I, p. 285.

news of Galileo's condemnation so frightened him that in the first moment of excitement he decided to burn the papers of his treatise, and then firmly resolved not to let anybody see them.[29] He refused even to send his treatise to his friend Mersenne to whom he had some time before promised it. At the latter's repeated admonitions he asked him again and again for some extension of time in order to revise and polish it.[30] It was, evidently, at this time that he took up the reconciliation of his physics with the biblical account of Genesis. The result is that *Le Monde* contains biblical expressions which have no connection with the fundamental principles of his physics. That these biblical expressions are later insertions is beyond doubt. It is confirmed by the fact that the letter in which Descartes proposed to take up a reconciliation of theology and his physics[31] dates from 1641, while his *Le Monde* was already completed in 1633.[32]

But even this remodelled form with its air of piety, he evidently found not orthodox enough for the pious minds of his day. It was impossible to rewrite it so that some one would not find fault with it. "Je ne puis si bien faire que certains gens ne trouvent occasion de me reprendre." No correction could save *Le Monde* from the heresy in which it was immersed. He saw no salvation for it unless the fundamental thesis, the movement of the earth, was crossed out, but this could not be done, for the exclusion of this theory would have destroyed the whole.[33] He, therefore, refrained from publication and for this reason only, as he explained, "rien ne m'a empêché jusques ici de publier ma Philosophie, que la défense du mouvement de la Terre, lequel je n'en saurais séparer, à cause que toute ma Physique en dépend."[34] He decided not to give it to the world until minds were more mature. There are fruits, he said in one of his letters, which have to be left on the tree to ripen; his *Le Monde* is one of those fruits for the picking of

[29] "Je m'étais proposé de vous envoyer mon Monde pour ces étrennes; mais je vous dirai, que m'étant fait enquérir ces jours à Leyde et à Amsterdam, si le *Système du Monde* de Galilée n'y était point, on m'a mandé qu'il était vrai qu'il avait été imprimé, mais que tous les exemplaires en avaient été brûlés à Rome au même temps, et lui condamné à quelque amende: ce qui m'a si fort étonné, que je me suis quasi résolu de brûler tous mes papiers, ou du moins de ne les laisser voir à personne." *Corr.*, Vol. I, p. 270.

[30] "Toutefois, parce que j'aurais mauvaise grâce, si après vous avoir tout promis, et si longtemps, je pensais vous payer ainsi d'une boutade, je ne laisserai pas de vous faire voir ce que j'ai fait le plus tôt que je pourrai; mais je vous demande encore, s'il vous plaît, un an delai pour le revoir et le polir." *Corr.*, Vol. I, p. 272.

[31] By his *Physics* he may also have meant his *Principles* which in fact represents a combination of *Le Monde* and the Genesis.

[32] "Il n'y aura, ce me semble, aucune difficulté d'accommoder la Théologie à ma façon de philosopher; car je n'y vois rien à changer que pour la Transubstantiation. Et je serai obligé de l'expliquer en ma Physique, avec le premier chapitre de la génèse." *Corr.*, Vol. III, p. 295.

[33] "Je confesse que s'il (le mouvement de la terre) est faux, tous les fondements de ma Philosophie le sont aussi, car il se démontre par eux évidemment. Et il est tellement lié avec toutes les parties de mon Traité, que je ne l'en saurais détacher, sans rendre le reste tout défectueux." *Corr.*, Vol. I, p. 271.

[34] *Corr.*, Vol. III, p. 258.

which no time will be too late.[35] We have his repeated assertions that the state of affairs at that time kept him from publishing this most valuable work. In a letter to Mr. Pollot he writes: "Si tous les hommes étaient de l'humeur que je vous crois, je vous assure que je n'aurais nullement délibéré touchant la publication de mon Monde, et que je l'aurais fait imprimer il y a déjà plus de deux ans." [36] In another letter, written in answer to the questions put to him concerning his belief as to the reality of the quality of weight or the attraction of the earth, he said: "Je ne saurais expliquer mon opinion sur toutes ces choses, qu'en faisant voir mon Monde avec le mouvement défendu, ce que je juge maintenant hors de saison." [37]

He was firm in his resolution not to publish his *Le Monde* until conditions should have changed. The repeated requests of his friends to give it to the world, and reproaches for keeping the fruits of his studies to himself, could not make him change this decision; "Sinon que, les causes qui m'en ont empêché ci-devant n'étant point changées, je ne dois pas changer de résolution," he wrote to Mersenne.[38] He preferred to suppress his most valuable production rather than to have the church against him, as he declared: " . . . comme je ne voudrais pour rien du monde qu'il sortît de moi un discours, où il se trouvât le moindre mot qui fût désapprouvé de l'Église, aussi aime-je mieux le supprimer, que de le faire paraître estropié." [39] It is probable that at that time he destroyed those of his works which are irretrievably lost. For Galileo's condemnation seems to have very much impressed him. He was anxious to find out the exact cause of Galileo's condemnation, and kept on asking Mersenne to let him know whatever he might happen to hear concerning this matter.[40] After this event he closely followed the literature for and against the movement of the earth,[41] and

[35] "Comme on laisse les fruits sur les arbres aussi longtemps qu'ils y peuvent devenir meilleurs, nonobstant qu'on sache bien que les vents et la grêle, et plusieurs autres hasards, les peuvent perdre à chaque moment qu'ils y demeurent, ainsi je crois que mon Monde est de ces fruits qu'on doit laisser mûrir sur l'arbre, et qui ne peuvent trop tard être cueillis." *Corr.*, Vol. II, p. 552.

[36] *Corr.*, Vol. I, p. 518

[37] *Corr.*, Vol. I, p. 324.

[38] *Corr.*, Vol. II, p. 565.

[39] *Corr.*, Vol. I, p. 271.

[40] "Puisque vous avez vu le livre de Galilée, je vous prie aussi de me mander ce qu'il contient et quels vous jugez avoir été les motifs de sa condemnation." *Corr.*, Vol. I, p. 298.

Descartes's confused description of the laws of motion is ascribed by Henry More, in his *Antidote against Atheism*, of 1712, directly to Galileo's condemnation. "I can not but observe," he says, "the inconvenience this eternal force and fear does to the Common Wealth of Learning, and how many innocent well-deserving young Wits have been put upon the Rack, as well as Galileo into Prison. For this frightened Descartes into such a distorted description of Motion, that no man's reason could make good sense of it, nor Modesty permit him to fancy anything Nonsense in so excellent an Author." Preface, p. xi.

[41] "Je vous prie de me mander le nom de ce traité, que vous dites avoir été fait depuis par un ecclésiastique, pour prouver le mouvement de la terre, au moins s'il est imprimé, et s'il ne l'est pas, je pourrais peut-être bien donner quelque avis à l'auteur qui ne lui serait pas inutile." *Oeuvres*, Vol. VI, p. 263, Ed. Cousin.

betook himself to a revision of whatever he thought contained illegal statements, suggestive of favoring the belief in the movement of the earth.[42]

The attitude of the learned of the school towards his works discouraged him to such an extent that at first he did not want to publish anything at all except his five or six sheets concerning the proof of the existence of God, declaring, "Je ne sais point de loi qui m'oblige à donner au monde des choses qu'il témoigne ne point désirer." That there were quite a few sympathizers encouraged him little when he thought of the fact that these were helpless while his enemies had all the power in their hands.[43]

3

The checking influence which the circumstances of that time had on Descartes will be better understood through a consideration of his personality. His aristocratic birth and education contributed a good deal to the conservatism which we find in his works despite their promising outset. Descartes descended from an old aristocratic family and probably inherited many prejudices and traditions characteristic of the nobility. His nearest relatives on both sides were engaged either in military or civil service, and there is no reason to suppose that the narrow-mindedness usually found among the bureaucracy had not affected the minds of his relatives also. Descartes's father was by profession a lawyer and held a position as state counselor. Both his profession and his position were such as to make him conservative. Of his three children, only René Descartes was at all radical. His other son, a lawyer, was a conservative gentleman to whom anything beyond interest in the politics of local affairs seemed eccentricity. There is nothing extraordinary known about his daughter and we can only suppose that she belonged to the ladies of "good society" who measured thought and actions by what was accepted. Thus, his close family circle presented no opportunity for the development of a radicalism in Descartes.

The education which he received in college was favorable to conserving traditions and prejudices imbibed in childhood. He spent nine

[42] "Pour les lunettes, je vous dirai que depuis la condemnation de Gallilée, j'ai revu et entièrement achevé le Traité que j'en avais autrefois commencé." *Corr.*, Vol. I, p. 322.

[43] "Et si quelques-uns le désirent, sachez que tous ceux qui font les doctes sans l'être, et qui préfèrent leur vanité à la vérité, ne le veulent point, et que pour une vingtaine d'approbateurs qui ne me feraient aucun bien, il y aurait des milliers de malveillants qui ne s'épargneraient pas de me nuire, quand ils en auraient l'occasion. C'est que l'expérience m'a fait connaître depuis trois ans, et quoique je ne me repente point de ce que j'ai fait imprimer, j'ai toutefois si peu d'envie d'y retourner, que je ne le veux pas même laisser imprimer en latin, autant que je le pourrai empêcher." *Oeuvres*, Vol. VIII, p. 208, Ed. Cousin.

years of his youth as a resident pupil in a Jesuit college which was established primarily for the nobility. The course of study in such a Jesuit college looked toward a clerical vocation, and the instruction was conducted accordingly. The first two years of the college period were devoted mainly to spiritual exercises. The piety implanted in him at college did not abandon him; it manifested itself in later years in the observation of religious customs.[44] The Jesuit college, as an institution which was protected by the Pope and the state, had as its chief aim to develop in the students a spirit of loyalty to the king and to the Pope and submission to all established authority. The discipline of the college, which required censoring the letters of the pupils and allowed only witnessed interviews with their relatives and friends, could not but influence a mind even less impressionable than Descartes's. Descartes, whom the spirit of radicalism had not yet affected, and in whom the critical spirit was not yet fully developed, became very fond of his masters. Moreover, since he had very early lost his mother and had been separated from his father through the latter's second marriage, he was probably not spoiled with too much attention in his childhood, and was, therefore, very grateful for all the attention that he enjoyed in the college. The fact that he was a privileged student, one of those for whom Henry IV had erected the college, and also that he was inquisitive and had a love for study, had disposed the instructors and the rector of the college in his favor. The latter, also considering Descartes's weak health, granted to him little privileges for which Descartes felt grateful all his life. As he was of a very impressionable disposition, the love for his masters and teachers inoculated in childhood lasted into his later years, and he felt embarrassed when he saw that he could no longer accept what they had taught him, and that the deviation from their teachings might lead to a break of the friendly relations with them.[45] Nay, this respect for his educators and their teachings was so deeply rooted in him that it really was a hard struggle for Descartes to utter things which he clearly saw his benefactors could not approve. The Jesuits thus played a considerable part in the development of his intellectual life. They had a double influence on him: in his childhood through their education whose spirit of conservatism had left ineradicable traces, and in later life through their influential position in France which made him

[44] "On the occasion of a startling dream he decided to go to Italy "pour former le vœu d'un pèlerinage à Nôtre-Dame de Lorette." Baillet, *La vie de M. Des Cartes.*

[45] "Car, ayant de très grandes obligations à ceux de votre Compagnie, et particulièrement à vous, qui m'avez tenu lieu de Père pendant tout le temps de ma jeunesse, je serai extrêmement marri d'être mal avec aucun des membres dont vous êtes le Chef au regard de la France. Ma propre inclination, et la considération de mon devoir, me porte à désirer passionément leur amitié." *Corr.*, Vol. IV, p. 156.

fear to be declared heretical by them. The love for his masters he could have more easily overcome than his fear of them.

Descartes was, like many aristocrats, a gentleman of settled habits, to whom the quietude and comforts of his private life meant a great deal. He would not tolerate the least disturbance in the ways and habits of his daily life. He excused himself in a letter to M. Pollot for having left without a good-bye, advancing the fact that, upon leaving the Princess de Bohème he saw two or three men approaching whom he heard mentioning his name. For fear that they might stop him and keep him in conversation over the hour at which he was used to going to bed, he retired as quickly as possible.[46] One of his main reasons for living a life of retirement in the northern corner of Holland was to avoid inconveniences caused by Parisian social life, the inconveniences of being disturbed by his neighbors.[47] Moreover, he was in childhood of a very weak constitution. He had inherited, he tells us, a dry cough and a pale complexion. His health was, therefore, very tenderly cared for at home and in school, and, though at the age of twenty he was cured of this inherited weakness, he seemed to have acquired the habit of always being very mindful of his health. In every undertaking his health always found first consideration. Believing that the passing from one extreme to the other to be most dangerous to the health, he was careful to avoid abrupt changes. He, therefore, before going to Holland went first to a retired northern place in France in order to get used to a colder climate and to the life of solitude. Invited to Sweden, he looked for the season which would make the journey most pleasant to him who had lived so many years in retirement. The chief aim of his medical studies was the preservation of his health and the prolongation of his life. Health and happiness meant to him "les deux principaux biens qu'on puisse avoir en cette vie." In his anxiety for the preservation of his health he valued peace and rest more than anything else in the world, " . . . ma sureté et mon repos . . . sont les biens que j'estime le plus au monde . . . "[48] His life motto, therefore, was "*bene vixit, bene qui latuit.*"[49]

This love for peace and rest explains his extreme caution. Nothing could move him to change his decision not to publish *Le Monde* when he saw his tranquillity threatened. His desire for quietude was stronger than his belief that everybody is bound by duty to publish his contributions for the benefit of others and for the advancement of science. Nor did he regret the loss of time in the vain labor of composing a work which was to be hidden from the world, if its being hidden was

[46] *Corr.*, Vol. IV, p. 106.
[47] *Corr.*, Vol. I, p. 385.
[48] *Corr.*, Vol. IV, p. 55.
[49] *Corr.*, Vol. V, p. 232.

the price necessary for the maintenance of his peace.[50] At the instigation of his friend Mersenne, he promised to publish his work only if he would not have to sacrifice thereby the peacefulness which he enjoyed.[51] His first publications, which cost him his tranquillity, had made his vocation distasteful to him. "Parce que je n'ai pas eu la même prudence à m'abstenir d'écrire, je n'ai plus tant de loisir ni tant de repos que j'aurais, si j'eusse eu l'esprit de me taire." [52] Though he was not unmoved by success, as he says, he nevertheless preferred oblivion to unfavorable criticism. He dreaded reputation more than he wished for it, because reputation "to some extent diminishes one's liberty and leisure." [53] Liberty and leisure meant so much to him that no monarch was rich enough, he said, to buy them of him.[54] Paris, where the reaction was very strong, offered little of these treasures. The obstacles which his philosophy encountered there made that capital unpleasant to him. He confessed to Mersenne that he did not like the spirit in Paris on account of the many "divertissements" of Parisian life.[55] By these "divertissements" he may have meant controversies which had been going on there. Being reserved and timid by nature, he shunned all struggles, and to preserve his rest and quietude he did not want to trouble himself much in fighting for the truth. He hesitated to publish even his first works for fear of getting into controversies which he found were plentiful without his.[56] If his works could not be approved without opposition, he said, he had rather not publish them at all, as he hoped that if "the truth can not find a place in France, it will perhaps not fail to find it somewhere else." [57]

The strict censorship in France was one of the reasons which made him look for a place where his ideals of liberty and leisure could be better realized. Holland was then the freest of all countries. Liberalism had spread there to such an extent that freedom of thought was almost allowed. This, it seems, was to Descartes the place of abode which

[50] "Le désir que j'ai de vivre en repos et de continuer la vie que j'ai commencée en prenant pour ma devise *bene vixit, bene qui latuit*, fait que je suis plus aisé d'être délivré de la crainte que j'avais d'acquérir plus de connaissances que je ne désire, par le moyen de mon Écrit, que je ne suis faché d'avoir perdu le temps et la peine que j'ai employée à le composer." *Corr.*, Vol. I, p. 285.

[51] "Si je le puisse faire sans mettre au hasard la tranquillité dont je jouis. C'est pourquoi, encore que cela n'arrive pas sitôt." *Corr.*, Vol. II, p. 553.

[52] *Lettres*, Vol. I, p. 104, Ed. Clerselier.

[53] "Je crains plus la réputation que je ne la désire, estimant qu'elle diminue toujours en quelque façon la liberté et le loisir de ceux qui l'acquièrent." *Corr.*, Vol. I, p. 136.

[54] "La liberté et le loisir . . . lesquelles deux choses je possède si parfaitement, et les estime de telle sorte, qu'il n'y a point de monarque au monde qui fût assez riche pour les acheter de moi. Cela ne m'empêchera pas d'achever le petit traité que j'ai commencé; mais je ne désire pas qu'on le sache, afin d'avoir toujours la liberté de le désavouer." *Corr.*, Vol. I, p. 136.

[55] "Pour en parler entre nous, il n'y a rien qui fut plus contraire à mes desseins que l'air de Paris, à cause d'une infinité de divertissements qui y sont inévitable." *Corr.*, Vol. II, p. 151.

[56] *Corr.*, Vol. I, p. 271.

[57] "Si la vérité ne peut trouver place en France, elle ne laissera peut-être pas d'en trouver ailleurs et que je ne m'en mets pas fort en peine." *Corr.*, Vol. II, p. 335.

came nearest to his ideal. "Quel autre lieu pourrait-on choisir au reste du monde, où toutes les commodités de la vie, et toutes les curiosités qui peuvent être souhaitées soient si faciles à trouver qu'en celui-ci? quel autre pays, où l'on puisse jouir d'une liberté si entière, où l'on puisse dormir avec moins d'inquiétude, où il y ait toujours des armées sur pied, exprès pour nous garder, où les impoisonnements, les trahisons, les calomnies soient moins connues, et où il soit demeuré plus de reste de l'innocence de nos aïeux." [58] The "calumnies" of which Descartes speaks here are the accusations of heterodoxy which rained upon him from all sides in Paris, but which he did not admit as just objections leaning upon the orthodox arguments of his philosophy. Even his love for truth retreated where his rest and comfort were concerned. The little inconveniences caused by the objections after the very first publications made him use extreme caution to avoid further disturbances. He took all care to make sure before the publication of his works that there was nothing in them that might arouse suspicion concerning his piety or his loyalty to the established order. To succeed better in this he was anxious to have his works read and criticized by prominent theologians, "afin d'en avoir leur jugement, et apprendre d'eux ce qui sera bon d'y changer, corriger ou ajouter, avant que de le rendre public." [59] But before his manuscripts were seen by any one else they went through the hands of his friend Mersenne, a keen theologian. Descartes, however, was careful not to let even Mersenne see whatever he knew was too heretical, as, for instance, his *Le Monde*, which, he saw, could not be brought up to the mark of the orthodoxy of the day. Before publishing the *Meditations* he sent around through Mersenne copies of it to the different theologians of the Sorbonne. He was anxious to get the approval of the Sorbonne as a support against the attacks of the minor ecclesiastics, being aware of the fact that the time had not yet outgrown authoritative protections. Even he who felt the weight of an argument was afraid to acknowledge it before he was sure how the majority would accept it.[60] To escape all ecclesiastical suspicion he dedicated his *Meditations* to the doctors of the Sorbonne [61] and was later very disap-

[58] *Corr.*, Vol. I, p. 204.

[59] "J'ai maintenant entre les mains un Discours . . . il contiendra une bonne partie de la Métaphysique. Et afin de le mieux faire, mon dessein est de n'en faire imprimer que vingt ou trente Exemplaires, pour les envoyer aux vingt ou trente plus savants Théologiens dont je pourrai avoir connaissance, afin d'en avoir leur jugement, et apprendre d'eux ce qui sera bon d'y changer, corriger ou ajouter, avant que de le rendre public." *Corr.*, Vol. II, p. 622.

[60] "Je croirais être injuste, si je désirais qu'on les aprouvât avant qu'on sache comment elles seront reçues du public." *Corr.*, Vol. III, p. 597.

[61] "Je le dédierais à Messieurs de la Sorbonne en général, . . . afin de les prier d'être mes protecteurs en la cause de Dieu. Car je vous dirais que les cavillations du Père Bourdin m'ont fait résoudre à me munir dorénavant le plus que je pourrai, de l'autorité d'autrui, puisque la vérité est si peu estimée lorsqu'elle est toute seule." *Corr.*, Vol. III, p. 184.

pointed when even it was attacked; "Celui de mes livres auquels ils s'attaquent est adressé à Messieurs les Docteurs de la Faculté de Théologie de Paris, et il a été plus d'un manuscrit entre leur main pour être examiné avant que je l'aie fait imprimer. De sorte qu'il ne peut être soupçonné de contenir aucune chose contre la Religion Chrétienne en général ni contre les mœurs . . . " For the same reason he points in his *Le Monde*, which, of course, he first intended to publish, to the fact that his description of the formation and growth of things in the world is only the play of his imagination with no intention of explaining things in the real world.[62] The same is repeated in the *Principles* where *Le Monde* is practically taken over and which is written in such a way as to throw sand into the eyes of the Inquisition, to use an expression of Baillet.[63] To hide the revolutionary attempts of his *Discourse*, stress is laid on the biographical sketch. To give assurance of his innocent intention he pointed to the fact that he named his treatise not "*Traité de la Méthode*, mais *Discours de la Méthode*, ce qui est le même que *Préface* ou *Avis touchant la Méthode*, pour montrer que je n'ai pas dessein de l'enseigner, mais seulement d'en parler." [64]

Descartes's refusal to deal with questions which might make his enemies suspicious of his orthodoxy or his loyalty to established institutions shows that while his love for truth was strong, his love of self was stronger. Arnauld reproached Descartes for not treating the question of error in the pursuit of good and evil, accusing him of fear of encountering too great an opposition. That this was a weighty reason he himself confessed, declaring that he declined to give his view concerning morals for the reason that "*Messieurs* les Régents de Collèges sont si animés contre moi, à cause des innocents principes de Physique qu'ils ont vus, et tellement en colère de ce qu'ils n'y trouvent aucun pretexte pour me calomnier, que, si je traitais après cela de la Morale, ils ne me laisseraient aucun repos." [65] The fact that his proof of the existence of God only caused him to be accused of atheism and skepticism, made him fear to say anything concerning the soul after death or concerning the question in how far we have to love life and to fear death, when these questions were put to him. For, he complained, it was vain for him to have opinions which conformed most closely to religion and to the welfare of the state, since his opponents tried to convince

[62] "Et mon dessein n'est pas d'expliquer, comme eux, les choses qui sont en effet dans le vrai monde; mais seulement d'en feindre un à plaisir, dans lequel il n'y ait rien que les plus grossiers esprits ne soient capables de concevoir, et qui puisse toutefois être créé tout de même que je l'aurai feint." *Le Monde, Oeuvres*, Vol. XI, p. 36.

[63] A. Baillet, *La vie de M. Des Cartes*, Paris, 1691.

[64] *Corr.*, Vol. I, p. 349.

[65] *Corr.*, Vol. IV, p. 536.

him that his beliefs were contrary to religion and to the state.[66] The fear of unpleasant experiences which the opposition of the Jesuits might bring him restrained him from openly saying many a thing which he considered to be true. Thus he declared that he abstained from directly disproving old principles through the consideration of Father Charlet, head of the Company of the Jesuits and his educator, and other prominent members, his friends.[67] Another statement of his affirmed more directly that the Jesuits contributed a good deal toward restraining his liberty in the expression of his thought: "Je suis marri de la mort de Père Eustache; car encore que cela me donne plus de liberté de faire mes Notes sur la Philosophie, j'eusse toutefois mieux aimé le faire par sa permission, et lui vivant." [68] The same is true of the school. Though his philosophy is fundamentally opposed to that of the school, he often refrained from saying things which were against it "afin de n'insulter point ouvertement à pas une des opinions qui sont reçues dans les écoles." We hear, in a letter to the Princess Elizabeth, of a treatise, *Traité de l'érudition*, in which Descartes for a similar reason refrained from including all that was supposed to be there, declaring that he was not in a position to despise the enmity of the school. Believing that the enmity even of an ant may be harmful, or at any rate, can do no good, he was greatly concerned with gaining the favorable disposition of his enemies and possible persecutors. We hear him repeatedly addressing the doctors of the Sorbonne for the extension of their influence in his favor. He conciliated his previous teachers to gain their protection from the attacks of the rest of the Jesuits whom he did not know.[69] His letters to his teachers are full of gratitude and express appreciation of their virtue and of the doctrines taught by them which, he assured them, he respected even at the time of writing these letters.[70] But these expressions of gratitude and rever-

[66] "Car puisqu'un Père Bourdin a cru avoir assez de sujet, pour m'accuser d'être sceptique, de ce que j'ai refuté les sceptiques; et qu'un ministre a entrepris de persuader que j'étais Athée, sans en alléguer d'autre raison, sinon que j'ai tâché de prouver l'existence de Dieu; que ne diraient-ils point, si j'entreprenais d'examiner quelle est la juste valeur de toutes les choses qu'on peut désirer ou craindre; quel sera l'état de l'Âme après la mort; jusques où nous devons aimer la vie; et quels nous devons être, pour n'avoir aucun sujet d'en craindre la perte? J'aurais beau n'avoir que les opinions les plus conformes à la Religion, et les plus utiles au bien de l'État, qui puissent être, ils ne laisseraient pas de me vouloir faire à croire que j'en aurais de contraires à l'un et à l'autre." *Corr.*, Vol. IV, p. 536.

[67] "Mais parce que ceux qui y ont le plus d'intérêt sont les Pères Jésuites, la considération du Père Charlet, qui est mon parent et qui est maintenant le premier de leur Compagnie, depuis la mort du Général, duquel il était Assistant, et celle du Père Dinet et de quelques autres des principaux de leur Corps, lesquels je crois être véritablement mes amis, a été cause que je m'en suis abstenu (from disproving the old principles) jusques ici." *Corr.*, Vol. IV, p. 225.

[68] *Corr.*, Vol. III, p. 286.

[69] *Corr.*, Vol. I, p. 409.

[70] *Corr.*, Vol. III, p. 100; Vol. IV, p. 156.

"Principalement parce qu'ayant autrefois été instruit près de neuf ans dans un de vos collèges, j'ai conçu depuis ma jeunesse tant d'estime et j'ai encore maintenant tant de respect pour votre vertu et pour votre doctrine, que j'aime beaucoup mieux être repris par vous que par d'autres." *Corr.*, Vol. III, p. 100.

ence for his teachers were dictated rather by the fear of a possible persecution than by love and devotion, although the latter feelings, inoculated in childhood, do not seem to have left him completely. We hear him in one of his letters rejoicing over the praise received by him from the two prominent Jesuit-fathers, Père Charlet and Père Dinet, for this gave him hope that the whole Company of the Jesuits would be on his side. In his anxiety to be considered orthodox he missed no occasion to assert that his philosophy was perfectly harmless to theology and that it did not contain anything which could not be reconciled with religion or with approved authors.[71]

Descartes, as we have shown, particularly anxious to avoid all conflicts with the church, showed himself, when, in spite of precautions, he got into conflict, quite ready to take back his statements. At the news of Galileo's condemnation he did not even think of attempting to demonstrate the truth of his position which, he found, was in perfect agreement with facts, but openly declared "je ne voudrais toutefois pour rien du monde les soutenir (these doctrines) contre l'autorité de l'Église."[72] Such a concession on the part of Descartes is interesting, for he was not of a yielding temper and fought for his opinions when objections were made from the point of view of science with no bearing on the teachings of the church. He was provoked when his originality was disputed in whatever did not interfere with theology.

4

Despite Descartes's efforts, his orthodoxy was very much suspected. After his death it was inquired whether he was pious or whether he spoke freely of religion. There had spread rumors that, dying, he confessed to the Princess of Sweden that he did not believe in God and immortality. His friends, however, denied that he ever made such confessions.

This strong suspicion from the side of orthodoxy was due to the fact that Descartes was ambiguous in his treatment of religious questions. Despite the fact that he gave in his *Meditations* such a prominent place to the proofs of the existence of God and of the distinction between soul and body, his relation to these questions was such as to trouble the orthodox mind. As long as Descartes gave us his unbiassed conclusions based only on the grounds of experiment and observation, he, in his account of man, explained away the soul and in his account of the world left no room for providence and grace. Only when rumors con-

[71] "Puisqu'on ne m'oppose ici que l'autorité d'Aristote et de ses sectateurs, et que je ne dissimule point que je crois moins à cet auteur qu'à ma raison, je ne vois pas que je doive me mettre beaucoup en peine de répondre." Vol. VIII, p. 281, Ed. Cousin; Adam and Tannery Edition, Vol. III, p. 432, Latin.

[72] *Corr.*, Vol. I, p. 285.

cerning his doubt had spread and he was asked to apply his method to matters of faith, he gave in his *Discourse* and his *Meditations* the demonstrations concerning God and the soul, so as to testify to his orthodoxy. In the following works, however, he went back to what he had said before from the scientific point of view. He thus left in doubt his sincerity concerning belief in God and the soul. Moreover, the question of the soul was treated in his works in such an indirect way that the existence of a soul and its immortality were not even touched upon; the distinction made between soul and body left the question of the existence of a soul and its immortality open. Further explanations of his beliefs as to God and the soul, which we find in his correspondence, seem to point rather to the fact that he did not believe in a soul as conceived in theology, and that God was to him only a concept. Thus, in a letter to Mersenne, he saw in the theological ascription of extension to God the same mistake as ascribing corporeal existence to non-existences. With regard to the same question he remarked that in considering things of thought as existent things the mind plays only with its own shadows.[73] In a letter to Elizabeth, the relation of the soul to the body is compared to that of weight to matter. The soul is thus made dependent on the body. In another letter to the same princess, he says that the soul being united with the body may part with it, but adds that he did not deal with this question in his works, for this characteristic of the soul disproves its immortality and his purpose was to prove it. With regard to a life beyond, he writes to her: "Et quoique la Religion nous enseigne beaucoup de choses sur ce sujet, j'avoue néanmoins en moi une infirmité, qui m'est, ce me semble, commune avec la plupart des hommes, à savoir que, nonobstant que nous veuillions croire, et même que nous pensions croire très fermement tout ce qui nous est enseigné par la Religion, nous n'avons pas néanmoins coutume d'être si touchés des choses que la seule Foi nous enseigne, et où notre raison ne peut atteindre, que de celles qui nous sont avec cela persuadées par des raisons naturelles fort évidentes." [74] In mentioning to her a book by Igby dealing with the soul's state after death, he remarked: " . . . laissant à part ce que la foi nous en enseigne, je confesse que par la seule raison naturelle nous pouvons bien faire beaucoup de conjectures à notre avantage et avoir de belles

[73] "*Que Dieu est positivement et réellement infini, c'est à dire existant partout* . . . je n'admets pas ce *partout* . . . croyant . . . qu'a raison de son essence il n'a absolument aucune relation au lieu . . . Les difficultés suivantes me paraissent naître du préjugé qui nous a fait croire que toutes substances, celles-là même que nous reconnaissons incorporelles, sont véritablement étendues, et de la mauvaise manière de philosopher sur les êtres de raison, en attribuant les propriétés *de l'être* ou *de la chose* au non-être . . . et c'est bien conclure, lorsque vous dites que l'esprit se joue avec ses propres ombres, lorsqu'il considère les êtres de raison." *Corr.*, Vol. V, p. 343, Latin; Transl. by Cousin, Vol. X, p. 239.

[74] *Corr.*, Vol. III, p. 580.

espérances; mais non point en avoir aucune assurance." In a letter to Igby we find the supposition that God in His omnipotence might also destroy the soul after death.

It is interesting to note that Descartes's statements which may make one question his belief in the immortality of the soul and in God's existence were uttered to people whose influence he had no reason to fear, to the Princess Elizabeth, Henri More, of England, Igby, or other harmless persons. In his letters to Catholic theologians and Jesuits, the independence of the soul from the body is insisted upon and God is spoken of as possessing all attributes ascribed to him by theology.

RÉSUMÉ

A study of Descartes's philosophy in the light of his time has shown that the mixture of progressive thought and tradition in his philosophical system is due to the circumstances under which he wrote. Descartes was one of the progressive thinkers of his day; but in that transition period, when religion was the main interest and theology the main science, original ideas were suppressed as conflicting with religious and theological doctrines. Descartes's scientific ideas met with opposition from the side of orthodoxy at the very outset. Therefore, in his love for peace and rest on account of weak health and inherited timidity and conservatism, both of which were strengthened through the conservative spirit of the Jesuit college, Descartes used extreme caution; he turned away from his naturalistic philosophy to the traditional problems and continued to express progressive ideas only in disguise.

CHAPTER V

DESCARTES IN THE HISTORY OF PHILOSOPHY

1

In the history of philosophy Descartes's fame rests on his treatment of traditional problems and principles. The following appreciation is characteristic of the historical reconstruction of Descartes: "La grandeur de Descartes, sa vraie grandeur, est dans ces pages immortelles où il met en lumière la preuve de l'existence de Dieu tirée de l'idée que nous en avons." [1] Similarly the traditional idealistic principles, the *Cogito ergo sum*, the principle of distinctness and clearness of our ideas as the criterion of truth, and the principle of God on which to ground this criterion, are considered as the most original ideas of his philosophy. He himself, however, as Falckenberg sees it, attributed to them no more importance than is attributed to a vestibule as compared to the whole building. However, "the vestibule has brought the builder more fame, and has proved more enduring, than the temple: of the latter only the ruins remain; the former has remained undestroyed through the centuries." [2] Descartes's real contributions were overlooked: the originality of his scientific philosophy, his appeal to reason, his recognition of the true justification for individualism—the equal capacity for reasoning in all men—the true significance of his doubt, met with no due consideration and appreciation.

2

The burden of responsibility for such a misrepresentation of Descartes lies partly on Descartes himself, partly on his theological contemporaries and the idealistic historians of later periods. As was pointed out, Descartes was compelled to keep his progressive ideas behind the screen of orthodoxy. His contemporary friends, to give his philosophy the appearance of legality and to secure for it a favorable reception, emphasized the traditional problems in his philosophy to the exclusion of everything else. The merits of his scientific theories were appreciated by them in the light of the Bible and the teachings of the church. Thus in an article *Traité de l'infini*,[3] of 1750, by Abbot Terrason, there is discussed the import of Descartes's suggestion of the

[1] E. T. L. Gautier, *Portraits du XVII^e siècle.*
[2] Falckenberg, *History of Modern Philosophy*, transl. by A. C. Armstrong.
[3] *Philosophical Review*, 1905.

possibility of many earths and of the infinity of the world from the point of view of redemption and the glory of God, to both of which Descartes's view is shown to be favorable. Descartes's mechanistic theory is estimated by Henry More in his *Antidote against Atheism*, written in 1712, as a doctrine of Moses contained in the Jewish Cabbala.

In later periods when the historians, themselves philosophers, thought they had emancipated themselves from traditional beliefs, they based their reconstruction of Descartes on the belief in a "world spirit" manifesting itself according to definite laws. From this point of view the *Cogito ergo sum* was very much welcomed. Hegel seized upon it as a justification of his stage division in the process of the "world-spirit's" manifestation. The *Cogito ergo sum* was exactly the identification of Being and Thought which, according to Hegel, the world-spirit was supposed to have reached on that stage. "In the celebrated *Cogito ergo sum* we thus have Being and Thought inseparably bound together." [4] That this identification of Being and Thought had once manifested itself in St. Augustine, Hegel in his Idea-intoxication overlooked.

The significance of Descartes's *doubt* was found by him in the fact that the renunciation of everything was an affirmation that the world spirit had arrived at the stage in which "thought commences from itself."

Thus Hegel approached Descartes's system from the standpoint of his own philosophy and emphasized in it only those points where he could locate "universal reflection," which, he declared, should have first claim upon our attention; this he found in Descartes's speculation. The latter's "empirical reflection and reasoning from particular grounds, from experience, facts, phenomena, being brought into play in the naïvest manner" did not fit into Hegel's scheme, and was thus left without attention. Descartes's system of Physics, which is the result of observation and experience, was considered by Hegel as the work of the understanding and, therefore, as of no special interest to him. He found it out of place and obscure.

Hegel's philosophy, in alleging that the Prussian state was an evolution of the world-spirit, had aroused great interest in the past and influenced the history of philosophy. The standard histories of philosophy written in modern times are by men of this tradition. They are all written from the same idealistic standpoint. Great injustice has been done to Descartes by all of them; once framed in idealism, his true picture never afterward appeared in the history of philosophy. It can be found in his works only.

[4] W. Fr. Hegel, *Lectures on the History of Philosophy*, transl. by Haldane and Simson, p. 228.

CHAPTER VI

CONCLUSION

A systematic study of Descartes's philosophy has shown that a complete omission of traditional problems leaves no lack in the philosophical system. It would, however, cause a break in the history of philosophy. Does this indicate that philosophy in general is bound to deal with these traditional problems? It has been said that philosophy begins where science leaves off, and so if the realm of the scientist is all in this world, the realm of the philosopher is naturally somewhere beyond. Such a conception of philosophy has undoubtedly been derived from its history. For philosophy, though originally evoked by facts, has in the course of time drifted away into abstract regions where shadows take the place of facts. The history of philosophy is full of problems about problems and not of problems about facts. For the circumstances that once called forth these problems have passed out of existence and no longer present problems. The result is that the history of philosophy is a play of conceptions. It represents a chain of transformations of one and the same material, which has been worked over and over again, every philosopher impressing upon it his personal and national characteristics; the practical Englishman putting upon it a stamp of common sense, the Frenchman with his love for precision and clearness making distinctions which the German strains every nerve to obscure. In German treatment which, as Falckenberg[1] says, "allows the fancy and the heart" to take an important part in the discussion, the philosophical material resulted in a mystical and poetical mass of descriptions of imaginary ultimates. The region of ultimates had been for centuries the home of the philosopher. He descends to facts only in order to place these facts in the ultimate realm. The question of ultimates was not, however, born with the philosopher. It did not bother the minds of the philosophers as long as their inquiries were directed just by the desire for knowledge. The Greeks were not concerned with this question. The problems of the early Greeks, with whom our philosophical record begins, were called forth by facts of nature. The fact that things come and go, live and die, started the Greek on his inquiry. In the Græco-Roman period the moral issue had a natural support in the social and political institutions of the day.

[1] Falckenberg, *Op. Cit.*

Even Plato, who was a poet to the depth of his soul, reached his ideals through the conditions of his time. Protagoras opposed all theories and looked for truth in a practical way. Aristotle's metaphysics deals with facts. The starting-point of both Plato and Democritus, the two opposites, in whom Greek philosophy culminates, is the world of experience. Only beginning with the medieval period did philosophy become characterized by a complete disregard of the facts of nature. The medieval philosophers were concerned with the world beyond, and, in their striving to come nearer to God, they got more and more away from God's world. The problems created by the supernatural took complete hold of philosophy and it became a sort of commentary on theology. There is in it much about heaven and very little about the earth. The earthly climate does not seem to agree with the philosopher; he stretches his imagination to heavenly regions and to the clouds. How many ingenious reveries and poetical fancies are given for the clearing up of truth? At best the philosopher gives us a picture of his own world, which is, however, only a very insignificant part of the whole world. Moreover, "if the mind of man works upon itself, as the spider works his web, then it is endless, and brings forth, indeed, cobwebs of learning, admirable for the fineness of thread and work, but of no substance and profit." [2]

Can the layman, therefore, be blamed for looking at philosophy as an idle study? What achievements can philosophy offer to such criticism? That the philosopher has never proved anything has become a truism. The philosopher, however, seems to think that it is his business to deal with questions, the solution of which lies somewhere beyond. Professor Calkins, in the introduction to *Persistent Problems of Philosophy*, admits that philosophers have not done much for the advancement of knowledge, but concludes with the encouragement to the idealistic philosopher that to be able to put questions and to know why one does not know is also an advantage. But has the philosopher found out why he does not know? It is true the apology of the philosopher has always been the limitation of the human understanding; it has been found inadequate to penetrate God's council. Despite this incapacity of the human faculty to grasp divine things, the philosopher has not given up mingling in God's affairs. Such persistency is worth inquiry. In connection with this question it must be taken into consideration that philosophy had been predominantly cultivated by theologians. In the middle ages philosophy was exclusively in the hands of monks and priests, that class which feels itself called upon to mediate between heaven and earth. Therefore, an endeavor on the

[2] Bacon, *Advancement of Learning.*

part of those philosophers to get an insight into heaven was quite natural. The romanticists, Fichte, Schelling, Hegel, were theologians. Of other modern philosophers Berkeley was a bishop, Leibnitz and Spinoza, students of theology. That theologians should deal with theological questions is not surprising; but it is a question what made philosophers, who were not theologians, interested predominantly in theological problems. The preservation of these problems in philosophy is partly due to the historical interest of the philosopher. To illustrate how problems are being perpetually continued in philosophy, Descartes's distinction between mind and body was the source of innumerable arguments concerning the ultimate spirituality or materiality of the world. Hobbes thought it was all material, Berkeley all spiritual. Leibnitz conceived a world of many spirits as more plausible. Accepting spirit as the reality, he was engaged in disproving the independent reality of extension, as thought to be held by Descartes. Locke's dualism led Berkeley to his world of ideas. Berkeley's conclusion supplied the material to Hume. Hume again aroused Kant out of his "dogmatic slumber." Hume's doctrine of the mind as a bundle of perceptions made Kant look for relating principles. The distinction between sense and thought made by Kant's predecessors led him to his twofold world of noumena. The attempt of Descartes, Leibnitz, and Berkeley to prove the existence of God on a rational basis made Kant deal with this question, arguing that it can not be proved by pure reason. Kant's thing-in-itself turned Fichte from his scientific determinism to the elaboration of an absolute self. Schelling and Hegel also entered the philosophical field by the way paved by Kant's thing-in-itself, the former developing the thing-in-itself into an unknowable, and the latter into a self which finds expression in all finite selves. Hegel in his turn started a school which still blunders in the region of the Absolute and sees no way out of it into the world of our experience.

The historical interest was, however, not always the thing that led philosophers into dealing with traditional material. Descartes, Bacon, and Hobbes, the pioneers of modern philosophy who intended a complete break with history, are nevertheless engaged in remedying medieval philosophy. How it came about that the traditional problems were continued even by those who attempted to get away from history can be disclosed only through a study of the philosopher in connection with his environment. Thus the study of Descartes in the light of his time has shown that he was brought to the treatment of traditional problems not by his interest in life, but by the conflict of free-thinking and orthodoxy in his day. Professor Bush has shown how the strict

censorship continued to be a "factor in the genesis of idealism" a good while after Descartes.[3]

But no matter what historical background caused the development, "philosophy" has come to be anything but philosophy, if we take it in its original meaning, *i. e.*, as the reflection about facts for the sake of a better understanding and better knowledge of them. The present state of affairs in philosophy is considered deplorable not only by laymen, but also by professional philosophers, and various remedies have been suggested. Among these there is one which, when applied to the history of philosophy, must necessarily stop the endless chain of dialectical circles into which the cultivation of the ideals of bygone times has resulted. This is the fruitful distinction of genuine and artificial problems, made by Professor Bush in a recent article on the *Emancipation of Intelligence.* For, "to show that the problem is about a fictitious subject-matter is to solve it." The genuineness or artificiality of a problem is, according to Professor Bush, discovered by the inquiry as to what raised the question; the application of this test to the history of philosophy has revealed the fact that present-day philosophy is mainly occupied with animistic traditions and that, therefore, the greater number of philosophical problems are artificial problems.

Though the sifting of artificial problems from philosophy may lead to the discarding of many a good old problem to which professional philosophy seems to be very much attached and to leaving theology to the theologian, the philosopher for this reason will not have to close his shop. For if "philosophy is thought about life, representing but the deepening and broadening of the common thoughtfulness," [4] all problems of life require its services. Even metaphysics, but only one, whose "greatest ally is Logic," [5] is a necessity in life. For greater proficiency the philosopher will have, however, to associate with the scientist, and to go hand in hand with him instead of beginning where the latter left off, for "toutes les sciences sont filles de la philosophie: ou plûtot toutes les sciences, en tant qu'elles découlent de l'observation et du raisonnement, et qu'elles ne nous donnent que les produits exactement conformes à la nature des choses, se réunissent pour composer elle-même la philosophie." [6]

[3] W. T. Bush, "A Factor in the Genesis of Idealism." *Essays Philosophical and Psychological in Honor of William James.*

[4] R. B. Perry. *Approach to Philosophy.*

[5] F. J. E. Woodbridge, *Metaphysics.*

[6] J L. Piestre. *Les Crimes de la Philosophie.*

SUPPLEMENTARY NOTES

I maintain (p. 27) that Descartes's failure to solve the traditional problems is partly due to the fact that Descartes did not stop to consider that the nature of these problems is such as to guarantee no success even if most carefully studied by means of the most perfect dialectics. Descartes, however, commits this mistake only in his works that deal with the traditional problems. In his *Rules*, nevertheless, he makes the following statement: "The man who faithfully complies with the former rules in the solution of any difficulty, and yet by the present rule is bidden to desist at a certain point, will then know for certainty that no amount of application will enable him to attain to the knowledge desired, and that not owing to a defect in his intelligence, but because the nature of the problem itself, or the fact that he is human, prevents him. But this knowledge is not the less science than that which reveals the nature of the thing itself; in fact, he would seem to have some mental defect who should extend his curiosity farther." [1]

The history of philosophy interprets Descartes as maintaining the identity of matter and extension. It is, however, in his later works that he expresses himself so as to warrant such a conclusion. In his *Rules*, he confutes the scholastic notion of extension and emphasizes the fact that while *body possesses extension, extension is not body.*[2]

It is curious to note that Descartes's doctrine of extension is contained in Calvin's *Institutes*, published originally in Geneva in 1541. The same conclusion as to the identity of body and extension was reached by Calvin through theological interest. This theory is expressed by both authors in similar words. In the *Institutes* it says: Quel est nostre corps. N'est-il pas tel; qu'il ha sa propre et certain measure . . . ? . . . Et ceste est la condition du corps, qu'il consiste en un lieu certain en sa propre et certaine mesure et en sa form." [3] The corresponding words in Descartes are: . . . "Nous trouverons que la véritable idée que nous en avons consiste en cela seul que nous appercevons distinctement qu'elle est une substance étendue en longeur, largeur, et profondeur: or cela même est compris en l'idée que nous avons de l'espace, non seulement de celui qui est plein de corps, mais encore de celui qu'on appelle vide." [4] The same identifica-

[1] *Rules, Works*, Vol. I, p. 23. Transl. by Haldane and Ross.
[2] *Rules, Works*, Vol. I, pp. 58, 59. Transl. by Haldane and Ross.
[3] J. Calvin, *Institution de la Religion Chrestienne*, texte de 1541, Paris, 1911, p. 641.
[4] *Principes*, Part II, Art. XI.

tion of body and extension we find in St. Augustine in the following passage: "Spatia locorum tolle corporibus, nusquam erunt, et quia nusquam erunt nec erunt." [5] . . . "Prius abs te quæro utrum corpus nullum putes esse quod non pro modo suo habeat aliquam longitudinem et latitudinem et altitudinem? Si hoc demas corporibus, quantum mea opinio est, neque sentiri possunt, neque omnino corpora esse recte existimari." [6]

Descartes's conception of freedom, which he gives when brought to this question by discussion, suggests the biological conception as exemplified by Bergson. The expressions of both authors on this point bear close resemblance. Thus Descartes says: "Il faut remarquer que la liberté peut être considerée, dans les actions de la volonté, ou avant qu'elles soient exercées, ou au moment même qu'on les exerce." [7] Bergson says: "La thèse de la liberté se trouverait ainsi verifiée si l'on consentait à ne chercher cette liberté que dans un certain charactère de la decision prise, dans l'acte libre en un mot." [8] "L'acte libre se produit dans le temps qui s'écoule." [9]

[5] St. Augustine, *Epist.* 57, quoted by Bouillier, *Histoire de la Philosophie Cartésienne*, Part I, p. 182.
[6] St. Augustine. *De quantit. animæ*, Chap. IV, quoted by Bouillier, *Op. Cit.*, p. 182.
[7] *Works*, Vol. III, p. 379.
[8] H. Bergson, *Données immédiates de la conscience*, p. 132.
[9] *Id.*, p. 168.